# Leading the energy change





French société anonyme with a share capital of €911,085,545 Registered head office: 22-30, avenue de Wagram 75382 Paris Cedex 08 552 081 317 RCS Paris

# **EDF group 2008 Document de Référence**

This document is an unofficial translation of the French *Document de Référence* filed with the *Autorité des marchés financiers* (the "AMF") on April 14, 2009 in accordance with article 212-13 of the AMF General Regulations. This unofficial translation has been prepared by EDF for informational purposes only and has not been reviewed or registered with the AMF. The French *Document de Référence* may be used for purposes of a financial transaction if supplemented with an offering memorandum (*note d'opération*) that received a visa from the AMF. In the event of any ambiguity or discrepancy between this unofficial translation and the French *Document de Référence*, the French version shall prevail.

Pursuant to Article 28 of the European Commission Regulation n° 809/2004, the following information is incorporated by reference into this *Document de Référence*:

- Consolidated financial statements of the EDF group for the year ended December 31, 2007, prepared in accordance with international accounting standards, as well as the accompanying statutory auditors' reports, set forth respectively in section 20.1 (pages 214 to 315) and section 20.2 (page 316 to 317) of the EDF group's 2007 *Document de Référence*;
- Consolidated financial statements of the EDF group for the year ended December 31, 2006, prepared in accordance with international accounting standards, as well as the accompanying statutory auditors' reports, set forth respectively in section 20.1 (pages 197 to 289) and section 20.2 (page 290 and 291) of the EDF group's 2006 Document de Référence; and
- The discussion of the EDF group financial situation and results for the year ended December 31, 2007, presented on pages 130 to 175 in Chapter 9 of the EDF group's 2007 *Document de Référence*.

Copies of this *Document de Référence* are available free of charge at EDF (22-30, avenue de Wagram, 75382 Paris Cedex 08) and on the EDF website (http://www.edf.com) as well as on the AMF website (http://www.amf-france.org).

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In this Document de Référence (the "Document de Référence"), unless otherwise stated, the references to "Company" and "EDF" refer to EDF S.A., the parent company, and the references to "EDF group" and "Group" refer to EDF and its subsidiaries and shareholdings.

In addition to the information contained in this Document de Référence, investors should carefully consider the risk factors described in section 4.2 ("Risk Factors"). These risks, or one of these risks, could negatively impact the Group's activity, situation or financial results. Furthermore, other risks, which have not yet been identified or considered as material by the Group, could have the same negative impact and investors could consequently lose all or part of their investment in the Company.

Moreover, this Document de Référence contains information relating to the markets in which the EDF group is present. This information has been taken from surveys carried out by external sources. Considering the very rapid changes that characterize the energy sector in France and in the world, it is possible that this information could prove to be erroneous or no longer be up to date. The Group's activities could consequently evolve in a manner different from those described in this Document de Référence and the declarations or information appearing in this Document de Référence could prove to be erroneous.

The forward-looking statement within this Document de Référence, notably in section 6.1 ("Strategy"), could also be impacted by risks, uncertainties or other factors that may cause the future results, performances and achievements of the Group to differ significantly from the objectives expressed and suggested. These factors may include changes in economic and commercial environment or in regulations as well as to the factors set forth in section 4.2 ("Risk Factors").

Pursuant to European and French legislation, the entities responsible for the transmission and distribution of electricity within the EDF group may not communicate certain information they gather within the framework of their activities to the other entities of the Group, including its Management. Similarly, certain data specific to generation and marketing activities may not be communicated to the entities responsible for transmission and distribution. This Document de Référence has been prepared by the EDF group in compliance with these rules.

A glossary for the major technical terms is provided at the end of this Document de Référence, before the Appendices.

# Persons responsible

**1.1** Person responsible for the *Document de Référence* 

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**1.2** Certification from the person responsible for the *Document de* Référence containing the annual financial report

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## Person responsible for the Document de Référence

Pierre Gadonneix EDF Chairman and Chief Executive Officer

## Certification from the person responsible for the Document de Référence containing the annual financial report

"Having taken all reasonable care to ensure that such is the case, I certify that, to the best of my knowledge, the information contained in this Document de Référence accurately reflects the facts and contains no omission likely to affect its meaning.

I certify that, to the best of my knowledge, the financial statements are prepared in accordance with accounting standards and that they give a true and fair view of the assets and liabilities, financial position and the income of the company and of all the companies included in the consolidation, and that the management report (Rapport de gestion) reports a true and fair view of the business trend, the income and the financial position of the company and of all the companies included in the consolidation and a description of the main risks and uncertainties they face.

I have obtained a letter from the statutory auditors certifying that they have verified the financial and accounting information provided in this Document de Référence and that they have read the document in entirety.

The consolidated financial statements for the financial year ended December 31, 2008, prepared in accordance with IAS-IFRS standards, as adopted by the European Union, and included in this Document de Référence in section 20.1 ("Historical Financial Information"), have been reviewed by the statutory auditors. Their report is set forth in section 20.2 of this Document de Référence.

Without qualifying their opinion, the statutory auditors, in their report on the consolidated financial statements for the year ended December 31, 2008, draw the reader's attention to the following points:

• the valuation of long-term provisions relating to nuclear electricity production, as described in notes 2.2.1 and 32.2 to 32.4 to the consolidated financial statements, results as indicated in note 2.2.1 from management's best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning;

• the approach adopted by EDF to present in the balance sheet its obligation to renew property, plant and equipment used for the French public distribution of electricity, as described in note 2.24, is based on the specific characteristics of concession contracts. The amount of contractual obligations as calculated and disclosed annually to the grantors described in activity reports is used for evaluating the obligation. An alternative approach based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life would result in a different representation of the obligation towards grantors. The impacts this approach would have had on the accounts are shown in note 2.24 for information purposes. Measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of costs and disbursement dates.

The consolidated financial statements for the financial years ended December 31, 2007 and 2006, prepared in accordance with IAS-IFRS standards as adopted by the European Union, have been reviewed by the statutory auditors. Their reports are set forth in section 20.2 of the 2007 Document de Référence and in section 20.2 of the 2006 Document de Référence. These financial statements and the corresponding reports of the auditors are incorporated by reference into this Document de Référence in accordance with article 28 of EC Regulation 809/2004, dated April 29, 2004.

Without qualifying their opinion, the statutory auditors, in their report on the consolidated financial statements for the year ended December 31, 2007, draw the reader's attention to the following points:

• the valuation of long-term provisions relating to nuclear electricity production, as described in notes 2.2.1, 31.2 and 31.5 to the consolidated financial statements, results, as indicated in note 2.2.1, from Management best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows as well as the results of current negotiations with Areva. Changes in some of these parameters could lead to a material revision of the level of provisioning;

• the approach adopted by EDF to present in the balance sheet its obligation to renew property, plant and equipment used for the French public distribution of electricity, as described in note 3, is based on the specific characteristics of concession contracts. The amount of contractual obligations as calculated and disclosed to the grantors in reports is used for evaluating the obligation. An alternative approach based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life would result in a different representation of the obligation towards grantors. The impacts this approach would have had on the accounts are shown in note 3 for information purposes. Measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of costs and disbursement dates.

Without qualifying their opinion, the statutory auditors, in their report on the consolidated financial statements for the year ended December 31, 2006, draw the reader's attention to the following points:

• the valuation of long-term provisions relating to nuclear electricity production, as described in notes 2.2.1, 29.2 and 29.3 to the consolidated

- financial statements, results, as indicated in note 2.2.1, from Management best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows as well as the results of current negotiations with Areva. Changes in some of these parameters could lead to a material revision of the level of provisioning;
- the approach adopted by EDF to present in the balance sheet its obligation to renew property, plant and equipment used for the French public distribution of electricity, as described in note 3, is based on the specific characteristics of concession contracts. The amount of contractual obligations as calculated and disclosed to the grantors in reports is used for evaluating the obligation. An alternative approach based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life would result in a different representation of the obligation towards grantors. The impacts this approach would have had on the accounts are shown in note 3 for information purposes. Measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of costs and disbursement dates".

Pierre Gadonneix Chairman and CEO of EDF

## **Auditors**

**2.1** Statutory auditors

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2.2 Alternate auditors

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# **Statutory auditors**

Deloitte et Associés,

185, avenue Charles de Gaulle, 92200 Neuilly-sur-Seine, represented by Mr. Amadou Raimi and Mr. Tristan Guerlain.

KPMG SA.

Immeuble Le Palatin, 3 Cours du Triangle, 92939 Paris La Défense Cedex, represented by Mr. Jean-Luc Decornoy and Mr. Michel Piette.

Appointed by a decision at the ordinary Shareholders' Meeting of June 6, 2005 for a period of six financial years, this term expires at the end of the ordinary Shareholders' Meeting which will approve the accounts for the financial year ending on December 31, 2010.

The auditors designated above have thus certified the accounts presented in this Document de Référence.

## **Alternate auditors**

BEAS,

7-9, Villa Houssay, 92200 Neuilly-sur-Seine.

SCP Jean-Claude André,

2 bis, rue de Villiers, 92300 Levallois-Perret.

Appointed by a decision at the ordinary Shareholders' Meeting of June 6, 2005 for a period of six financial years, this term expires at the end of the Shareholders' Meeting which will approve the accounts for the financial year ending on December 31, 2010.

## **Selected financial information**

## **Preamble**

Pursuant to European regulation n° 1606/2002 of July 19, 2002 on the adoption of international accounting standards, the Group's consolidated financial statements for the year ended December 31, 2008, are prepared under the international accounting standards published by the IASB and approved by the European Union for application at December 31, 2008. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and interpretations (SIC and IFRIC).

## **Key financial information**

The selected financial information is taken from the EDF group's consolidated financial statements at December 31, 2008, which have been audited by EDF's

The selected financial information below must be read in conjunction with (i) the consolidated financial statements included in section 20.1 ("Historical Financial Information") of this Document de Référence, and (ii) the operating and financial review contained in Chapter 9 of this Document de Référence.

#### **Extracts from the consolidated income statements**

(in millions of euros)	2008	2007
Sales	64,279	59,637
Operating profit before depreciation and amortization (EBITDA)	14,240	15,210
Operating profit (EBIT)	7,911	9,991
Income before taxes of consolidated companies <sup>(1)</sup>	4,744	7,457
EDF NET INCOME	3,400	5,618

<sup>(1)</sup> The income before taxes of the consolidated companies is EDF's net income before income taxes, share in income of companies accounted for under the equity method, net income from discontinued operations and minority interests.

#### Extracts from the consolidated balance sheets

(in millions of euros)	December 31, 2008	December 31, 2007
Non-current assets	141,132	134,572
Current assets	59,154	51,308
Assets classified as held for sale	2	269
TOTAL ASSETS	200,288	186,149
Equity (EDF's share)	23,058	27,210
Minority interests	1,784	1,586
Non-current provisions	43,415	44,038
Other non-current liabilities	73,814	64,623
Current liabilities	58,217	48,578
Liabilities related to assets classified as held for sale	0	114
TOTAL EQUITY AND LIABILITIES	200,288	186,149

## **Extracts from the consolidated cash flow statements**

(in millions of euros)	2008	2007
Net cash flow from operating activities	7,572	10,222
Net cash flow used in investing activities	(16,665)	(5,428)
Net cash flow used from financing activities	8,811	(2,116)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(282)	2,678

## Information concerning net indebtedness

	December 31,	December 31,
(in millions of euros)	2008	2007
Loans and other financial liabilities	37,451	27,930
Derivatives used to hedge liabilities	(381)	23
Cash and cash equivalents	(5,869)	(6,035)
Liquid assets	(6,725)	(5,682)
Net financial liabilities from companies disclosed in non-current liabilities related to assets classified as held for sale	0	33
NET INDEBTEDNESS	24,476	16,269

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## Risk management and control in the EDF group

## 4.1.1 General framework for managing and controlling the Group's risks

For many years the EDF group has pursued a policy of managing its operational, financial and organizational risks (see "Report of the Chairman of the Board of Directors of EDF on corporate governance and internal controls" shown in Annex A to this Document de Référence).

In 2003, given the changing context, the Group decided to implement an overall process for managing and controlling its risks, reinforcing existing plans, in particular by creating the Corporate Risk Management Division (Direction du Contrôle des Risques Groupe, or "DCRG").

The objectives of the management and control policy are to:

- allow identification and ranking of risks in all domains to gain increasingly firm control over them, under the responsibility of operational management:
- allow Officers, Directors and the Group's governance bodies to have a consolidated view, regularly updated, of the major risks and their level of control:
- contribute to safeguarding the Group's strategic and financial business plan;
- meet the expectations and inform external stakeholders on the risks of the Group and the process for their management.

The scope of risk management includes EDF's business and those of its subsidiaries under EDF's operational control. Hence it does not include subsidiaries not under EDF's operational control because of the rules on independent management (RTE-EDF Transport, EDF Réseau Distribution France – ERDF: regulated subsidiaries) and the entities under joint control (in particular, EnBW, Edison or Dalkia International).

The scope of risk control includes EDF's business and that of its major subsidiaries in France and abroad. For EDF entities not subject to its operational control, risk control is implemented by the governance bodies of the entities

Given the fact that the acquisition of British Energy by EDF is recent (see section 6.3.1.1.3 ("British Energy")), the presentation in sections 4.1.1 ("Risk management and control in the EDF group") and 4.1.2 ("Management of industrial and environmental risks") does not take into account the control and risk management within the British Energy group.

#### 4.1.1.1 RISK MANAGEMENT AND CONTROL PRINCIPLES

As a general rule, operational and functional entities are responsible for managing risks that are within their scope of activity.

Risks are controlled by a system implemented independently of the risk management functions. This system ensures a standard approach for the identification, assessment and control of risks.

According to those principles, every six months EDF establishes a consolidated mapping of its major risks for the entities under its operational control or under joint control (except for Dalkia International), based on their representations. The consolidated mapping is approved every six months, by the TOP 4 and presented to the Audit Committee of the Board of Directors (see section 14.2.3 ("TOP 4 and Executive Committee")).

The global risk mapping process backs up other processes implemented by the Group, in particular, the set-up of the audit program, the "Insurance" policy and its implementation (see section 4.1.3. ("Insurance")), the crisis management policy, the analysis of risks concerning matters examined by the Group's decisional bodies (such as TOP 4, the Committee of Commitments and Holdings, the Committee for Fuel Commitments, the Steering UpStream – Downstream – Trading Committee, etc.). The risks' control process in particular contributes to securing the investment and long-term commitments process, by ensuring compliance with the risk analysis methodology principles for matters presented to the Committee of Commitments.

#### RTE-EDF TRANSPORT

In relation to RTE-EDF Transport, risk management and control are organized at the two management levels concerned:

- at the national level, RTE-EDF Transport's Executive Committee approves twice a year the mapping of its major risks which is then presented to the Comité de Supervision Economique et d'Audit of the Supervisory board of RTE-EDF Transport. The Executive committee entrusts a national manager with the responsibility of monitoring the identified risks. RTE-EDF Transport's Risk Audit Department carries out the national audits sponsored by the Executive Committee, to which it reports its findings and recommendations:
- at the local level, each of RTE-EDF Transport's units and functional entities is responsible for its own analysis of the risks associated with its activities, controlling these through appropriate audits, and reporting at a national level.

#### EDF RESEAU DISTRIBUTION FRANCE - ERDF

ERDF identifies and manages its risks according to Group methodology. Risk control is implemented in application of the Group control principles by a procedure independent of ERDF's operational units, to verify, with reasonable certainty, control of its business:

- a mapping of the major risks relating to the perimeter of ERDF is updated each half year. After the validation by ERDF's Board of directors, it is presented to the Comité de Supervision Economique et d'Audit of ERDF and to the Supervisory board. For each significant risk identified, an officer (member of the Executive Committee of ERDF) is designated and a national coordinator is responsible for implementing action plans covering associated risks. An annual program of national audits sponsored by the ERDF's Executive Committee built from the risk analysis and led by the Audit Division – Internal Control – Risks of ERDF complements the control system;
- each Regional Operational Division and functional operational division is responsible for its own analysis of risks relating to its activity. To do this, it conducts an upstream risk analysis using the transversal methodology used within ERDF. The internal control plans are subject to a reporting and a consolidation at a national level.

The progress of the audit program, of the internal control and of the efficiency of the improvement actions taken are also subject to a validation by the Board of Directors and to a semi-annual presentation to the Comité de Supervision Economique et d'Audit.

#### 4.1.1.2 MANAGEMENT AND CONTROL OF ENERGY MARKET RISKS

The risk factor relating to the energy markets is described in section 4.2.2 ("Risks associated with the Group's activities") below.

#### 4.1.1.2.1 FRAMEWORK OF THE FINANCIAL MANAGEMENT OF **ENERGY MARKET RISK**

In conjunction with the opening of the final customers' market, developments of the wholesale markets and on the international scene, the EDF group is exposed to price variations on the energy market which can have a significant impact on its financial results.

As a consequence, an "energy market risk" policy (concerning electricity, gas, coal, oil products and CO<sub>2</sub> emission allowances) is set up by the EDF group and applicable to EDF and entities under its operational control (see section 9.10.2 ("Financial risks control and management")).

This policy aims at:

- defining the general framework within which different entities of the Group carry out their operational activities (energy generation, optimization and distribution), as well as articulating it with EDF Trading;
- consolidating the exposure of the different subsidiaries and entities under EDF's operational control in the various structured markets related to energy;
- implementing a coordinated hedging policy at Group level.

Principles of operational management of the energy market risks are based on clarifying the responsibilities for managing energy market risks and distinguishing what forms part of generation assets management on the one hand, and trading on the other hand.

Generation and supply assets managers are responsible for implementing a risk management strategy minimizing the impact of energy market risks on their financial results. Yet they remain exposed to a risk which cannot be covered on the markets, given different factors such as the lack of liquidity or depth of the markets, the uncertainty on volumes, etc. This could have a material effect on the Group's financial results.

Within the Group, positions relating to energy markets are mainly taken by EDF Trading, which is the trading entity of the Group. As such, EDF Trading is subject to a strict governance and control framework in line with the current practices in trading companies.

The principles of operational management of the energy market risk are subject to monitoring indicators, to limits and to sensitivity scenarios of positions, ensuring the control of risks (see section 9.10.2 ("Financial risks control and management")).

#### 4.1.1.2.2 CONTROL ORGANIZATION

The process for controlling energy market risks for Companies in which the Group operates operational control is based on:

- a governance and market risk exposure measurement system, clearly separating management and risk control responsibilities;
- an express delegation given to each entity and formalized by risk management mandates establishing, among other things, the risk limits. These mandates allow the TOP 4 annually to set a consolidated risk profile on this scope, consistent with the financial objectives and thus to direct operational management of energy market risks (typically for a three-year period);
- a specific control process given its strong interactions with the decisions made within the generation and supply businesses. The process involves the Group's Management and is based on a risk indicator and measure system, itself based on a control comprising in particular alert procedures in case the risk limits are exceeded.

Concerning Edison and EnBW, co-controlled entities, the "energy markets risk" policy and the control process are examined by the governance bodies of these companies.

The consolidated exposure in energy market risks of the entities under EDF's operational control is presented to the Executive Committee on a monthly basis. The control processes are regularly reappraised and audited.

#### 4.1.1.3 MANAGEMENT AND CONTROL OF FINANCIAL MARKET RISKS

#### 4.1.1.3.1 FINANCIAL RISK MANAGEMENT FRAMEWORK

EDF has implemented a financial risk management framework (see section 9.10.1 ("Financial risks control and management")), which sets forth the policy and principles for managing the Group's financial risks (liquidity, exchange, interest rates and counterparty risks) and is applicable to EDF and only to subsidiaries that are controlled operationally. The Group is subject to equity risk through shares held in the framework of cash activities and through dedicated assets that are set aside to cover long-term nuclear power plant decommissioning provisions, which is subject to an ad hoc risk management framework. The above-mentioned principles are associated with monitoring indicators and limits for controlling these risks, in particular, with the objective of limiting the volatility of the Group's financial charges.

Moreover, each year, EDF's Audit Committee and Board of Directors monitor compliance with the financial risk management framework and change it if necessary, in particular, with respect to the limits and the associated target

EDF also uses stress scenarios to analyze the sensitivity of positions in extreme conditions. This allows EDF to monitor its exposure to significant "atypical" market swing risks. EDF also uses stop-loss markers, which determine the threshold at which a position must be closed.

#### 4.1.1.3.2 CONTROL ORGANIZATION

The Financial Risks Control Division (Département Contrôle des Risques Financiers, or "DCRF") is entrusted with the task of controlling the Group's financial risks by ensuring the correct application of financial management principles. This organization also has the task of carrying out a second level check (methodology and organization) of EDF and entities under its operational control, as well as an operational check of the financing activities at the parent level of the Group. The DCRF is reporting to the Risks Control Division Group (Direction Contrôle des Risques Groupe) in order to guarantee the independence between the organization that controls these risks and the risk management activities which are subject to its control.

With respect to the activities of EDF's financial markets front office, daily risk indicator monitoring reports are sent by the DCRF to the Group Treasury manager, to the head of the front office and to the manager of the DCRF. They are immediately notified to act in the event that limits are breached. The DCRF reports weekly to the DCFT's Operational Coordination Committee. The DCFT's Strategic Committee periodically monitors compliance with the limits and rules on any specific changes to the limits which may be required.

In addition, regular internal audits ensure that controls have been carried out properly. The internal control device covers two levels of control:

- the internal control exercised at the level of the Corporate Finance & Treasury Division: the person in charge of the Financial Risks Control Division (Département Contrôle des Risques Financiers) carries out the internal control. A dedicated team is in charge of setting up and performing an annual internal control plan. This plan includes several tasks ensuring the implementation of the control procedures and the respect of the framework for the front office:
- the control exercised by the Group Audit Department (Direction de l'Audit Groupe) which plans yearly audits on activities connected with financial markets and with the financial risk control.

In addition, EDF may hire, if necessary, external firms to audit the financial risks control process.

#### **4.1.1.3.3** LIOUIDITY RISK

The EDF group aims to have, at any given time, adequate financial resources to finance its everyday business, the investments necessary for its future development, annual allocations to the dedicated assets portfolio to cover long-term nuclear commitments as well as to cope with any exceptional events. The objective of cash flow management is to search for resources at the best price and to ensure that they may be obtained at any given time. A description is set forth in section 9.10.1.1 ("Liquidity situation and liquidity risk management").

EDF has set up regular monitoring of the Group's liquidity risk, incorporated within the business management cycle, including stress scenarios. The Operational Coordination Committee also reviews liquidity needs on a weekly basis.

#### 4.1.1.3.4 EXCHANGE RATE RISK

Due to the diversification of its business and its geographic base, the EDF group is exposed to exchange rate fluctuation risks, which may have an impact on the translation adjustments, Group balance sheet, financial charges, equity and results.

As a rule, the operating cash flows of the parent company and its subsidiaries are denominated in their local currencies, with the exception of flows associated with fuel purchases, which are mainly denominated in U.S. dollars, and certain flows associated with equipment purchases but for less significant amount.

A description is set forth in section 9.10.1.3 ("Exchange rate risk management").

#### **4.1.1.3.5** EQUITY RISK

EDF is exposed to equity risk on securities held as dedicated assets constituted to hedge the cost of long-term commitments associated with nuclear power as well as on securities regarding its cash assets.

A description is set forth in sections 9.10.1.5 ("Equity risk management") and 9.10.1.6 ("Equity risk on EDF's dedicated assets management").

#### 4.1.1.3.6 INTEREST RATE RISK

The Group's exposure to interest rate variations is divided into two types of risk: the risk of a change in the value of fixed rate financial assets and liabilities, and the risk of a change in flows associated with variable rate financial assets and liabilities.

In order to limit its exposure to interest rate variations, the Group, within the framework of its general policy, sets principles with the objective of limiting the risk of a change in the value of invested assets or the possible increase in financial charges.

A description is set forth in section 9.10.1.4 ("Interest rate risk management").

#### 4.1.1.3.7 COUNTERPARTY RISK

Counterparty risk is defined as the total loss that the EDF group would sustain in its operating business and on the markets if any of its counterparties defaulted and consequently failed to perform its contractual obligations. These losses can be of various kinds: bankruptcy of a counterparty may lead the Group to record unpaid receivables (settlement risk), to lose contracts that generate profits (opportunity cost), to incur an overcost to replace dishonoured agreements (replacement cost), to have to pay penalties to third parties if the failure of any of the counterparties resulted in the Group's being unable to honour its own obligations, etc.

The Group's entities that have a significant activity on the energy or financial markets (EDF, EDF Energy, EDF Trading, EnBW) have implemented a method to assign limits to each counterparty according to various criteria (agency ratings, indebtedness, cash flow, assets, equity) while taking into account the maturity and settlement dates and the nature of the transactions. In addition, as customary on the energy or financial markets, a margin call system has been established by certain entities of the Group in order to reduce or, if possible, eliminate the counterparty risk. Counterparty limits and their use are monitored regularly by such entities and the Group is organized for the proactive monitoring of its major counterparties to determine and update the Group's consolidated exposure to counterparty risk and for the establishment of rules and procedures to manage its consolidated exposures to counterparty risk. The subsidiaries RTE-EDF Transport and ERDF, which are also active on energy markets to purchase losses, also apply principles of regular monitoring of their counterparties and of attribution of limits for each counterparty depending on defined criteria.

In July 1, 2004, the Board of Directors approved the Group's counterparty risk management framework applicable to EDF and entities under its operational control. This framework provides for an organization to manage and monitor counterparty risk, with reporting procedures. There are three major principles at the core of this framework: (i) the organization's responsiveness, (ii) the independence of the risk control functions from the activities which generate risks and (iii) the responsibility of the entities for the management of their exposures. It also sets a limit for the Group which is applied to each counterparty. In addition to this limit applied to each counterparty, an additional limit for each counterparty has been established

in 2007 which is applicable to each entity of EDF or a Group's subsidiary controlled in an operational way.

## 4.1.2 Management of industrial and environmental risks

#### 4.1.2.1 MANAGEMENT OF THE NUCLEAR SAFETY RISK BY THE GROUP

The risk factors relating to nuclear safety are described in section 4.2.3 ("Specific risks relating to the Group's nuclear activity") below.

Like other operators, the Group assumes legal responsibility for the nuclear safety of its facilities. Nuclear safety includes all of the technical, organizational and human measures which are intended to prevent accident risks and to limit the effects of an accident, and which are taken at every stage of the life of a nuclear power plant (from design to operation and finally to decommissioning). The methods implemented as part of the nuclear safety regime have allowed continuous performance improvement for the protection of employees against the effects of ionizing radiation. The whole nuclear safety process is permanently controlled, both internally and externally (see below and section 6.2.1.1.3.2 ("Environment, safety and radiation protection")).

The construction of the French nuclear power fleet led to the institution of safety procedures which take into account, from the design stage onwards, the risks which may arise during power plant operation, whether these are associated with the operation of the facilities or to internal and external attack. These procedures rely mainly on the application of strict operating rules and on the Group's integrated skills (nuclear engineering, Research & Development ("R&D")) allowing for an earlier resolution of failures, continuous equipment appraisal, regular re-evaluation of safety margins, technical monitoring and the implementation of new highperformance techniques.

Maintaining and improving safety also relies on the concept of "in-depth defense", which provides for the systematic treatment of the risk of technical, organizational and human failures by interposing successive and independent lines of defense for facilities, process and organization.

The operating quality and safety of EDF's nuclear fleet depends on multiple internal inspections (mainly carried out by the Inspector General for nuclear safety and radiation protection, who reports directly to the Chief Executive Officer of EDF), and external inspections, mainly carried out by the French Nuclear Safety Authority (Autorité de sûreté nucléaire "ASN") which became an independent administrative authority as of Law n° 2006-686 regarding transparency and safety in the nuclear field dated June 13, 2006. Nuclear power plants must comply with a benchmark whose objectives are established and controlled by the ASN. The crisis management organization to be implemented in the event of an accident is regularly tested through accident simulation exercises. Each year, approximately 100 exercises are organized for the entire French nuclear fleet. Approximately 10 of these are carried out at a national level.

The liability scheme applicable to European operators and the associated insurance are described in section 6.5.4.2 ("Special regulations applicable to nuclear facilities").

#### 4.1.2.2 MANAGEMENT OF HYDROPOWER SAFETY RISK

Risk factors relating to hydropower safety are described in section 4.2.2 ("Risks associated with the Group's activities") below.

The Group operates hydroelectric facilities under concession agreements or administrative licenses. As operator, it is responsible for their safety.

The main risks associated with these facilities or their operation are the risk of dams or related hydropower facilities bursting, the risks associated with operating the facilities during floods and the risks associated with level variations due to the operation of the facilities.

There are three strategic activities in respect of the management of hydropower safety: the survey of dams and related facilities, the managing of the sites during floods and the managing of flow or level variations (see section 6.2.1.1.4.2 ("Hydropower safety")). In order to further improve the management of these risks, EDF launched in 1995 in France and in the French overseas departments, quality assurance procedures for these three activities and consequently obtained their ISO 9001 certification by the end of 2003, in each of the Hydropower Operating Divisions. These certifications form the basis of a continuous progress program in hydropower safety management. They have recently been renewed by the certification authorities. In addition, the detection, analysis of any potential incidents, implementation of corrective and preventive actions, feedback and the sharing of experience are the basis of the improvement process of the safety level of the facilities. Following the process started in 2005 in order to identify default risks for each kind of equipment and after several failures which made some facilities unavailable in the medium term (the Tuillères dam in Dordogne, etc.), EDF decided in 2006 to engage in a 2007-2011 program of technical upgrading and reinforced maintenance of the sites for a total amount of approximately €560 million in order to renew certain facilities, maintain, on the long-term basis, a high level of hydropower safety and preserve, in the future, the technical performances of its fleet. This hydropower facilities renewal program, called "Hydropower Safety and Performance" ("SuperHydro") which will be 5-year long is in progress and will cause during the works period, unavailabilities which will be more significant than those registered previously.

Actions to make the general public aware of and to brief them on the dangers of hydroelectric facilities, implemented about ten years ago, are renewed each year. The bursting of a dam or of a related facility may have serious consequences for persons and properties located downstream. The monitoring and maintaining of the facilities, which represent the principal measures to prevent the major risk of a dam bursting, are carried out under the control of the DRIRE (Direction régionale de l'Industrie, de la Recherche et de l'Environnement). The 68 largest dams are covered by a special action plan implemented under the authority of French préfets, pursuant to the French Law relating to major risks.

EDF has taken out a general civil liability insurance policy in relation to these risks (see section 4.1.3.1 ("Civil liability insurance (not including civil responsibility for nuclear power)")).

#### 4.1.2.3 MANAGEMENT OF RISKS ASSOCIATED WITH THE **GROUP'S TRANSMISSION AND DISTRIBUTION FACILITIES**

The risk factors relating to the Group's transmission and distribution facilities are described in section 4.2.2 ("Risks associated with the Group's activities").

In relation to transmission and distribution works, the investments made take into account the safety of persons and property.

In addition, in France:

• for third parties, communication actions are directed, among others, at associations of fishermen, and farmers' cooperatives to remind them of the dangers of handling tools in the vicinity of power lines;

• for operators, interventions on transmission or distribution grids are subject to authorizations that include an audit of skills, complemented by site inspections carried out by line managers and the accident prevention expert for the unit in question.

The Group has taken out a general civil liability insurance policy in relation to these risks (see section 4.1.3.1 ("Civil liability insurance (not including civil responsibility for nuclear power)")).

#### 4.1.2.4 MANAGEMENT OF THE RISKS ASSOCIATED WITH INDUSTRIAL ACCIDENTS OR WITH ENVIRONMENTAL OR SANITARY IMPACTS

The Group's activities could, in the absence of adequate management, be the source of industrial accidents or significant environmental and public

The risks of adverse effects on the natural environment or on the health of people living locally or on Group and subcontractors' personnel are governed by rules relating to the environment and public health which are increasingly restrictive. The corresponding risk factors are described in section 4.2.2 ("Risks associated with the Group's activities") below.

The Group's environmental policy incorporates developments on major environmental issues such as fighting climate change, adverse effects on biodiversity, etc.

The operational implementation of this policy is based on the deployment of an Environmental Management System in all of the Group's entities that have a direct or indirect environmental effect. The implementation of this Environmental Management System guarantees improved control of knowledge and compliance with regulations and anticipates changes to the regulations. This system received ISO 14001 certification in April 2002 (see section 6.4.3 ("Sustainable Development and Public Service Policy"). In relation to industrial accidents, the ISO 14001 standard involves taking a controlled set of systematic and planned actions, in particular, in relation to the prevention of major risks, emergency situation tests and safety management. Accordingly, the Group has taken out a general civil liability insurance policy (see section 4.1.3.1 ("Civil liability insurance (not including civil responsibility for nuclear power))").

Each year, follow-up audits are carried out by an authorized external entity in the entities of the EDF group within the scope of the certification. In 2008, the renewal audit confirmed the grant, for a period of three years, of the ISO 14001 certificate for the Environmental Management System implemented by the Group.

### 4.1.3 Insurance

To limit the consequences of certain events on its financial situation, the EDF group has taken out insurance aimed at covering its principal risks of damage to property and civil liability and personal insurance. Its nuclear power risks are covered by a special civil liability scheme as set forth below.

Insurance management is led by the Group's Insurance Division, whose task is to propose and continuously optimize the policy of managing risks that are transferable to the insurance and alternative markets. Once the Group's policy has been set and approved by EDF's Board of Directors, the Group's Insurance Division organizes its implementation through EDF Assurances, an insurance brokering subsidiary within the EDF group, and with major operators in the insurance and reinsurance markets.

The exchange of information between the Corporate Risk Management Division (see section 4.1.1 ("General framework for managing and controlling the Group's risks") above) and the Group's Insurance Division has been standardized so that both divisions benefit from a consolidated view, and one that is as comprehensive as possible, of the Group's risks. Starting from this shared vision, the Group can search for coverage that is matched to its insurable risks and that is consistent with the principles set forth in the Group's insurance policy.

EDF has decided to set up Group insurance policies largely extended to its subsidiaries that are controlled by EDF, including its regulated networks subsdiaries having a managerial autonomy (RTE-EDF Transport and ERDF) so as first to unify risk coverage and rationalize their management and, second, to control the corresponding costs of insurance. For the damage risk, EDF is a member of the mutual fund Oil Insurance Limited ("OIL") so as to respond to the risks of damage (other than to aerial systems) to the Group's own property or to property under concession (EDF and its consolidated subsidiaries in the US GAAP meaning), in particular nuclear plants (other than nuclear accidents), fossil-fired power plants, dams, systems' stepdown stations of transformation. OIL is a mutual insurance fund that is specific to the needs of the energy sector and which offers its members limited coverage for physical damage. Besides this basic coverage, EDF has set up additional insurance coverage for EDF and many of its French and international subsidiaries, including EDF Energy.

EDF Assurances carries out regular site inspections in partnership with internal divisions and the principal insurers. These inspections allow any risks associated with the Group's business to be identified and evaluated so as to reconcile the insurance coverage constantly with these risks.

The total insurance premiums for EDF and Group policies managed by EDF Assurances, including all types of coverage was €121.7 million in 2008, including €67.4 million expended by EDF.

EDF considers that the policies subscribed in accordance with the Group's insurance policy are consistent with the offer capabilities of the insurance market for operators of similar size in similar businesses worldwide, in particular, in relation to limits of coverage and deductibles. The nature and coverage of insurance may be altered at any time, depending on market conditions, on insurance policy rollout rates and on the assessment by EDF's Board of Directors of the risks and the adequacy of their coverage.

Insurance policies, in accordance with market practice, include exclusions, limits and/or lower limits.

#### 4.1.3.1 CIVIL LIABILITY INSURANCE (NOT INCLUDING CIVIL **RESPONSIBILITY FOR NUCLEAR POWER)**

#### SCOPE: RTE-EDF TRANSPORT, ERDF, EDF, AND ITS OTHER **CONTROLLED SUBSIDIARIES**

EDF has taken out a general civil liability policy covering it against the financial consequences of civil liability (excluding nuclear power) which may be incurred during its business as a result of damage caused to third parties. This specifically includes the risk of civil liability associated with a dam bursting, fossil-fired power plants, 400 kV substations in the Paris region, and other network equipment, together with those related to subsequent damage to the environment, for example by solid, liquid or gaseous waste.

These guarantees are purchased within the means available at acceptable prices on the insurance and reinsurance markets. The maximum coverage has been €1 billion. Pursuant to this policy, the share of risk kept by the Group, including Wagram Insurance Company Ltd.'s share, does not exceed €5 million per incident, although subsidiaries generally choose lower deductibles, better adapt to their financial capacities.

#### 4.1.3.2 CIVIL LIABILITY INSURANCE FOR DIRECTORS AND **CHIEF EXECUTIVE OFFICERS**

#### SCOPE: DIRECTORS AND CHIEF EXECUTIVE OFFICERS OF RTE-EDF TRANSPORT, ERDF, EDF, AND ITS OTHER CONTROLLED **SUBSIDIARIES**

EDF entered into a "civil liability for directors and chief executive officers" insurance program covering them against monetary disbursements resulting from liability arising in connection with their duties as directors and officers.

#### **4.1.3.3** DAMAGE INSURANCE (NOT INCLUDING NUCLEAR ASSETS)

#### 4.1.3.3.1 CONVENTIONAL DAMAGE POLICY

#### SCOPE: EDF, ERDF, EDF ENERGY, AS WELL AS MANY OTHER FRENCH AND FOREIGN SUBSIDIARIES

Wagram Insurance Company Ltd. (an Irish insurance company whollyowned by EDF), insurers and reinsurers, provide extensions of coverage to the OIL coverage (additional coverage for damage to property up to a maximum of €700 million and, depending on the subsidiary, a reduction in deductibles). For this "conventional damage" policy, the Group's retention on a claim (including the deductible and the share of the risk covered by Wagram Insurance Company Ltd.) does not exceed €20 million.

This policy includes coverage for operating losses in the event of property damage for most of subsidiaries controlled by EDF, but not for EDF itself. The measures taken to prevent industrial and environmental risks and to limit their effects are described in section 4.1.2 ("Management of industrial and environmental risks").

This "Damage" policy will be gradually extended to other subsidiaries controlled by EDF, as these have until now defined their own coverage policy for this type of risk.

#### 4.1.3.3.2 "CONSTRUCTION" RISK COVER

EDF subscribes to policies covering specific worksite risks (worksite allrisks/construction all-risks). These policies are not part of a Group program but are subscribed to on a case by case basis for major worksites, such as the Flamanville EPR, the construction of combined cycle power plants, dams, combustion turbines, etc.

#### 4.1.3.3.3 STORM COVER

#### SCOPE: AERIAL DISTRIBUTION NETWORK OF ERDF IN METROPOLITAN FRANCE AND OF EDF IN CORSICA

Following the storms of 1999, which had an overall impact on EDF's costs of approximately €1.5 billion, EDF wanted to obtain coverage for the consequences of property damage to the distribution network caused by storms, which represents the largest part of the exposure to risk. For this purpose, EDF entered into an innovative agreement in December 2003 with CDC-IXIS Capital Markets, which aims at covering the Group's distribution network against the consequences of exceptional events.

This contract has expired on December 18, 2008, which resulted in the payment of €138 million by Natixis (successor of CDC-IXIS) to ERDF (the contract has been brought to ERDF with the partial transfer of assets of EDF as part of the spin-off distribution of EDF in 2007). The study of the implementation modalities of a damage cover of the air distribution network is in progress.

#### 4.1.3.4 SPECIAL INSURANCE FOR NUCLEAR FACILITY **OPERATIONS**

#### **4.1.3.4.1** CIVIL LIABILITY

EDF's insurance policies have been taken out in accordance with the French Law of October 31, 1968, as amended by the French Law of June 16, 1990, which interpreted the obligations, in terms of the civil liability of nuclear facility operators, resulting from the Paris Convention (see section 6.5.4.2 ("Special regulations applicable to nuclear facilities")). Accordingly, in order to guarantee the availability of the funds required as a result of such obligations, EDF opted to take out insurance policies with AGF and European Liability Insurance for the Nuclear Industry (ELINI). The amounts covered by such policies conform to the limits of liability set in the event of an incident as stipulated by the regulation, at a nuclear facility as well as during transportation. For incidents on site, the total amount covered is €91.5 million per nuclear incident, such limit being available on a maximum of two occasions on each site over a three-year period. According to applicable regulation, insurance contracts subscribed by EDF to cover the risk of nuclear liability provide no deductible. However, the company Oceane Re (a Reinsurance company of the Group) who participates in this risk through reinsurance contracts issued to AGF and ELINI, retains an exposure lower than €10 million per incident.

A special insurance covers nuclear civil liability following incidents during transportation. The limit of coverage depends on the regulations of the country (or countries) crossed during the journey; for accidents during transportation through France, the total amount covered is €23 million.

As of the implementation of Law n° 2006-686 of June 13, 2006 regarding transparency and safety in the nuclear field (see section 6.5.4.2 ("Special regulations applicable to nuclear facilities")), EDF will have to adjust its insurance coverage so as to comply with the new guaranteed compensation cap (€700 million for what concerns the liability of a nuclear facility's operator). To this end, EDF will seek, under this new legislative framework, possible coverage solutions (nuclear pools, mutual funds, etc.). This provision will not be applicable until two-thirds of the signatory states will have ratified the Protocols amending the Paris and Brussels Conventions regarding civil liability in the nuclear field and for nuclear damages.

EnBW operates nuclear power plants in Germany. In this country, the nuclear facility operator's liability is strict and unlimited. Under the "atomic" law, operators of nuclear power plants must put in place a financial guarantee in the amount of €2.5 billion per incident. EnBW has thus taken out a nuclear civil liability insurance covering up to €255.6 million, and entered into a "solidarity" contract with other parent companies of German nuclear installation operators (E.ON, RWE and Vattenfall Europe) providing for coverage of the remaining €2,244.4 million. This contract stipulates that in the event of an incident, and once the relevant nuclear operator and its German parent company have exhausted their own resources, the other companies will contribute to enable the operator to satisfy its obligations.

British Energy operates nuclear power plants in the United Kingdom. In this country the nuclear facility operators liability is strict and unlimited for on site contamination but limited to £140 million for off site contamination. The UK government is responsible for costs over £140 million for offsite contamination. British Energy has thus taken out nuclear civil liability insurance policies covering (i) nuclear contamination on site for costs of up to £1.5 billion, in excess of £270 million, and (ii) contamination off site for costs of up to £140 million (with a deductible of £10 million) and associated costs of up to £80 million.

For more information on the regulations governing the nuclear operator's civil liability, see section 6.5.4.2 ("Special regulations applicable to nuclear facilities") below.

4.1.3.4.2 DAMAGE INSURANCE FOR NUCLEAR FACILITIES

In addition to the coverage due to EDF's participation in the OIL mutual fund, property damage related to EDF's nuclear facilities in France (including following a nuclear accident), as well as nuclear decontamination costs are covered by an insurance policy which requires the intervention, on the one side, of insurers, some of which are reinsured by the French nuclear pool (Assuratome) and, on the other side, of the European Mutual Association for Nuclear Insurance (EMANI), for a total capacity of €1,500 million above a deductible of €200 million.

EnBW enjoys, with a lower deductible, a similar coverage to that of EDF thanks to EMANI mutual fund and to the German pool.

British Energy has similar coverage to that of EDF, again employing the EMANI mutual fund and the UK pool.

4.2

## **Risk factors**

The Group operates in an environment that is experiencing profound change, generating various risks, some of which are outside of its control and which are in addition to the risks inherent in carrying on its businesses. The risks that the Group believes are material for its businesses are described below. One or several of these risks could possibly have an adverse effect on the Group's activities and/or its results. Moreover, other risks, of which it is currently unaware, or which it believes are not material at present, may have the same adverse effect.

The risks identified below relate to:

- the opening of European energy markets (see section 4.2.1 ("Risks associated with the opening up of the European energy markets"));
- the Group's activities (see section 4.2.2 ("Risks associated with the Group's
- the Group's nuclear activities (see section 4.2.3 ("Specific risks relating to the Group's nuclear activity"));
- the Group's structure and its transformation (see section 4.2.4 ("Risks relating to the structure and changes within the Group")); and
- the structure of EDF share capital and the listing of its shares (see section 4.2.5 ("Risks related to the capital structure of EDF and the listing of its shares")).

## 4.2.1 Risks related to the Opening of the **European Energy Markets**

The Group must face increased competition on the European energy markets, in particular, on the French electricity supply market, which is its principal market.

#### IN FRANCE

Since July 1, 2007, the electricity market has been totally open to competition. All of EDF's clients now have the option of choosing their electricity supplier and can therefore choose any of its competitors (see section 6.2.1.2 "Supply"). EDF has implemented measures aimed at contending with competition. However, given its previous monopoly position, EDF is bound to lose a share of the market in France. The losses could become increasingly significant, in particular due to the changing context of the competition (emergence of new players, mergers of existing operators, etc.). This decrease in EDF's market share could have, at constant consumption and price levels, a negative impact on the Group's sales. Finally, to achieve its objectives, EDF could be forced to increase its marketing expenditures or reduce its margins (especially in the event of price competition), which would have a negative effect on its profitability.

#### **OUTSIDE FRANCE**

Through its various subsidiaries in Europe, the Group faces different competitive situations, in particular in the electricity market:

- in the United Kingdom, the market has been totally open since the 1990s and is very competitive;
- in Germany, the market is also totally open, and is becoming increasingly competitive:
- in Italy, the degree to which the market has opened up is comparable to that in France, and Edison is in a position to challenge the historical operator (Enel); and
- in the rest of Europe, and in particular in central and eastern Europe, the market opening continues for the new members of the European Union.

In some countries, or in some regions within a country, the Group must pursue a defensive strategy with respect to its market share, as in France. In other countries, in contrast, it must pursue an offensive strategy to conquer market share. The type of competition, the development of this competition, and its effect on the Group's activities and its results vary from one country to another. They depend on the degree of deregulation in the country in question and on various other factors over which the Group similarly has no control.

Within this context, even if the Group considers that the European electricity market presents opportunities, the Group may not be able to defend its market share or win expected market shares, or may see its margins decrease, which would have a negative effect on its activities, its strategy and its financial results.

The legal and regulatory framework governing the liberalization of the energy sector is recent. This framework may change in the future and become more restrictive.

The Group's activities in France and abroad are subject to numerous regulations (see section 6.5 "Legislative and regulatory environment"). Moreover, and even in the European Union, where directives only define a general framework, laws and regulations may vary from one country to another.

This legal and regulatory framework, which organizes the opening up of the energy sector, is relatively recent and does not necessarily provide all of the solutions to the difficulties raised by the opening up of those markets. It is therefore likely to change, which could be unfavorable to the Group. Future changes to the legal and regulatory framework, whether in France or abroad, may lead to additional costs, be inconsistent with the Group's development model, or change the competitive context in which the Group operates.

In particular, in the UK, the arrangements for generators' access to the transmission network are currently under review. There is a risk that this review may fundamentally change the basis for charging and the physical access arrangements. This may result in higher costs for existing generation assets and may also undermine the profitability of any new

#### Risks associated with the fact that the Group will remain, in all likelihood for the next coming years, a major operator in the French electricity market.

In France, although it has observed a decrease in its market share, EDF will in all likelihood remain the largest operator in the French electricity market over the next few years, particularly in generation and supply. The transmission and distribution activities (operated by RTE-EDF Transport and by ERDF) are required to be operated in a framework guaranteeing their independence from generation and supply activities in order to ensure nondiscriminatory access to all users.

EDF intends to continue to strictly comply with current regulations on competition and non-discrimination.

However, competitors have and may initiate lawsuits for non-compliance with these regulations, which may be decided against the Group's interests.

Furthermore, regardless of any legal action initiated by competitors, the authorities may make decisions that are contrary to the Group's economic or financial interests or to its model as an integrated and balanced operator (see, in particular, section 6.5.1.1 "European legislation — Opening up the market" and section 6.2.1.2.1 "Opening of the French market for electricity sales and supply"). Thus, the European Commission notified in December 2008 to EDF a statement of objections in the context of an infringement presumption to Article 82 of the EU Treaty relating to abuse of dominant position (see section 20.5.1 ("Legal proceedings concerning EDF")).

Finally, European countries may claim that the opening up of the French market is insufficient and implement measures intended to slow the Group's growth in their own countries.

This may have material, negative consequences for the Group's model, activities and financial results.

#### Laws and regulations that require the transmission and distribution activities to be managed independently limit control over these activities.

In accordance with current laws and regulations, EDF has instituted a management of its distribution network that is independent from its generation and sales activities and has transferred its distribution and transmission network activities to wholly-owned subsidiaries. EDF may be affected by the loss of control over certain operational decisions, which may have an impact on its operating costs, which is a significant element in the profitability of its transmission and distribution activities in France. At the same time, EDF will continue to bear the risks associated with transmission and distribution activities, potential liabilities to third parties and factors that may affect the profitability of transmission and distribution assets.

Such risks may also be present in countries where the Group owns or operates transmission or distribution networks where it is subject to similar regulatory restrictions.

## 4.2.2 Risks related to the Group's Activities

The Group operates facilities that may cause significant harm to the natural or human environment or for which accidents or external attacks may have serious consequences.

The risks specific to nuclear facilities are described separately below (see section 4.2.3 "Specific risks relating to the Group's nuclear activity").

With respect to hydropower facilities, even if it is not the owner but a licensee, the Group is responsible as the operator for the safety of the facilities. The main risks associated with hydropower facilities and their operations are the risk of dams or associated hydropower facilities bursting, risks associated with operating the facilities during floods, and the risk associated with flow or level variations due to the operation of these facilities. To these risks are added those associated with attacks or ill-intentioned acts of any kind.

The Group takes, during the construction and operation of hydroelectric facilities, measures for accident prevention and safety (see section 6.2.1.1.4.2 "Hydropower safety") with the collaboration of public authorities. Nonetheless, the Group cannot guarantee that such events will never occur or that the measures taken will be fully effective in all cases, in particular, to deal with external events (floods, negligence or ill-intentioned acts of third parties).

Regarding electricity transmission and distribution facilities, persons working in or near this type of facility may be exposed, in the event of an accident, error or negligence, to the risk of electrocution. In this field, the Group also implements accident prevention and safety measures. However, the Group cannot guarantee that these measures will prove sufficient in all cases.

Questions with respect to the risks to human health as a result of exposure to electromagnetic fields ("Champs Electromagnétiques", or "CEM"), in particular, from power lines operated by the Group, are being raised both in France and abroad. Based on numerous studies completed over the past 20 years, numerous international health organizations (including the World Health Organization ("WHO"), the International Agency for Research on Cancer, the American Academy of Sciences, the American National Institute of Environmental Health Sciences, the English National Radiation Protection Board) consider, given currently available scientific information, that the existence of health risks as a result of exposure to CEM has not been proven. Although classified 2B (possible carcinogen) by the International Agency for Research on Cancer, the WHO considered in a report published in June 2007 that the health risks, if any, are low. As a precautionary measure, the European Commission has established guidelines relating to exposure of the public and of workers to electromagnetic fields. The WHO, in its June 2007 report, recommends compliance with these guidelines, with which the Group complies. However, medical knowledge about health risks related to exposure to electromagnetic fields may evolve or public sensitivity about such risks could increase, which could expose the Group to risks of litigation and/or could lead to the implementation of regulations imposing more stringent security measures for the operation or construction of transmission or distribution networks.

Finally, and more generally, the Group operates or has operated facilities which, as currently operated, could be or have been the source of industrial accidents or environmental and public health impacts (such as inadequately controlled emissions, leakages in electricity supply lines insulated with oil under pressure, a failure of decontamination facilities, pathogenic micro organism, asbestos, polychlorobiphenyls ("PCBs"), etc.). In particular, large quantities of hazardous materials (mainly explosive or inflammable, such as gas and fuel oil) are stored in certain facilities. These facilities may be located in industrial areas where other activities experiencing similar risks are operated, such that the Group's own facilities may be impacted by accidents occurring at neighboring facilities owned by other operators and not subject to the Group's control.

The Group implements in the framework of standards ISO 14001 (see section 4.1.2.4. "Management of risks related to industrial accidents and environmental and health consequences of Group's activities") measures both for accident prevention and repairs with respect to industrial accidents or harm to the environment caused by the facilities that it operates. These measures are intended, in particular, to protect the Group both against the risk of an accident (such as explosion, fire, etc.) occurring in its own facilities and against the impact of such an accident occurring in a neighboring facility owned by a third party.

Generally, the Group cannot guarantee that the measures taken for the control of these risks will prove fully effective upon the occurrence of one of the events referred to above.

An accident of the type described in the preceding paragraphs would have serious consequences for persons, properties and business continuity, and the Group could be found liable. The civil liability and damage insurance coverage taken out by the Group may prove to be significantly inadequate. Further, the Group cannot guarantee that it will always maintain a level of coverage at least equal to that currently in place and at a cost that would not be higher.

Furthermore, such accidents may lead to the shutdown of the facility in question and, potentially, similar facilities that may be considered to present the same risks.

In addition, facilities operated by the Group may be targeted by external attacks or ill-intentioned acts of any nature. Safety measures were provided for during the design of the facilities and sites and protective measures were implemented by EDF. Moreover, safety measures to counter all forms of attack were implemented in collaboration with the public authorities. Nonetheless, like any safety measures intended to counter an outside threat, the Group cannot guarantee that these will prove fully effective in all cases, including upon the occurrence of one of the events mentioned above. Nor can the Group guarantee that European and national legislation regarding the protection of sensitive sites and critical infrastructure will not become more restrictive, which could generate additional investments or costs for the Group.

An attack or ill-intentioned act committed on these facilities could have similar consequences to those of any of the accidents described above: (i) damage to persons and property, (ii) the Group's liability being sought on the basis of measures that are judged inadequate, or (iii) interruption to operations.

Any one of these events may have material, negative consequences on the Group's image, activities, results and financial situation.

#### A significant part of the Group's revenue is generated from activities subject to regulated tariffs, the level of which may have an impact on the Group's results.

In France, a significant part of EDF's revenue depends on regulated tariffs. Such tariffs are set by joint order decree of the Minister of Economy and the Minister of Energy, either upon proposal by or after consultation with the French Energy Regulation Commission (Commission de Régulation de l'Energie, or "CRE") (the integrated tariff and the TURPE, see section 6.2.2.4 "Tariffs for using the public electricity transmission and distribution networks (Tarif d'utilisation des réseaux publics de transport et de distribution d'électricité, or "TURPE")"). Tariffs are also set with regulatory authorities' intervention in other countries where the Group operates, including in the United Kingdom, Germany, China, Hungary and Slovakia.

Public authorities and the regulator may decide to limit or even block tariff increases, with no change to the quality of service. These authorities can also change the requirements to benefit from such regulated tariffs (with respect to France, see section 6.5.1.2 "French legislation" relating to Law n° 2006-1537 dated December 7, 2006 concerning the energy sector).

Even if regulated tariffs were revised in favor of the Group, it cannot guarantee that such tariffs will always be set at a level which would allow it to improve or maintain its profitability margins and its rates of return on investments, or at a level which would be compatible with an actual and total opening up of the markets. This could have a material, negative impact on the Group's activities and financial results.

In addition, in France, the provisions of Law n° 2006-1537 of December 7, 2006 concerning the energy sector in particular provided for the implementation for a period of two years, of a transitory regulated tariff for market adjustment ("TaRTAM") for the final customers who applied in writing to their supplier before July 1, 2007. Pursuant to an order dated January 3, 2007, the TaRTAM is of the same amount as the regulated tariff (no taxes included), plus an increase of 10%, 20% or 23% depending on the characteristics of the final consumer choosing the TaRTAM. The provisions of Law n° 2008-776 of August 4, 2008 concerning the modernization of the economy, provide for the extension of the TaRTAM for one additional year, i.e. until June 30, 2010. Customers who currently benefit from TaRTAM shall automatically continue to benefit from it until such date, while customers who had not yet requested the application. of the TaRTAM can do so until June 30, 2010. In addition, also in France, the law dated January 21, 2008, relating to regulated tariffs for electricity and gas allows residential customers who will have chosen a market offer for their accommodation, to opt back to the regulated tariff for such accommodation, not earlier than six months after their eligibility claims, subject to having made the request before July 1, 2010. This Law has extended to professional consumers (with a power lower or equal to 36 kVA) the right to return to regulated tariff in case of relocation, for electricity only. EDF cannot guarantee that the laws and regulations relating to the implementation of these provisions allowing a return to regulated price will not be extended again, or that no other tariff plans will be introduced at their term. EDF can neither guarantee that these provisions will not have a material adverse effect on the Group's activities and financial results, nor that the impact relating to the TaRTAM, will not be higher, than the impact EDF is currently able to estimate, nor that the assumptions taken into account for such estimation will not change, in a manner that will significantly increase the adverse effect of the implementation of such tariff on the Group's activities and financial results.

On Fall 2008, the French government created a Commission, presided by Mr. Champsaur, president of ARCEP, and composed of members of the parliament and experts, in charge of reflecting on the evolution of regulated tariffs.

#### EDF is responsible for certain commitments, namely public service commitments, paid for by mechanisms which could fail to provide complete compensation of excess charges incurred, or which could be questioned.

The public service contract entered into by the French State and by EDF on October 24, 2005 outlines the public service commitments that EDF must provide and sets out compensation mechanisms in respect of EDF as regards these commitments (see section 6.4.3.4 "Public Service in France").

EDF cannot ensure that the compensation mechanisms provided for by the laws and regulations applicable to it regarding its public service commitments and the implementation of regulated tariffs will provide for full compensation of the costs incurred by the Group in order to respect such commitments and/or implement such tariffs. EDF cannot guarantee either that these compensation mechanisms will not be called into question or that existing mechanisms could fully cover potential additional costs to be incurred in relation with new obligations of EDF under its public service commitments.

If any of these events should occur, it may have a negative impact on the Group's activities and its financial results.

#### The Group's activities require various administrative authorizations that may be difficult to obtain or whose grant may be subject to conditions that may become significantly more stringent; some activities are subject to special taxation.

The operations and development of the Group's industrial activities – generation, transmission and distribution - require various administrative authorizations, at local and national levels, in France and abroad. The procedures for obtaining and renewing these authorizations can be drawnout and complex. Obtaining these authorizations is not routine and the conditions attached to obtaining them may change and are not always predictable. The EDF group may accordingly be required to pay significant amounts to comply with the requirements associated with obtaining or renewing these authorizations (for example, the costs of preparing the application for the authorizations or investments associated with installing equipment required before the authorization can be issued). Its industrial activities may also be penalized. Delays, extremely high costs or the suspension of its industrial activities due to its inability to obtain, maintain, or renew authorizations, may have a negative impact on the Group's activities and profitability. In addition the Group may also have invested resources without obtaining the necessary permits and authorizations and therefore have to cancel or withdraw from a project, which may have a negative impact on its business or development.

Some of the Group's activities, for example, its nuclear, fossil fuel and hydropower generation activities in France, are subject to special taxation, which could increase. That would have a negative impact on the Group's financial results.

#### In some cases, the Group operates its generation, transmission or distribution activities within the context of public service concessions and it is not always the owner of the assets it operates.

The Group does not always own the assets that it uses for its activities and in such case, frequently operates them under a concession governed by public law.

Accordingly, in France, ERDF does not own all the assets of the distribution networks but operates them under concession agreements negotiated with local authorities (see section 6.2.2.2.3 "Concessions"). Pursuant to the French Law of April 8, 1946 and the French Law of February 10, 2000, only EDF can be appointed by local authorities to operate their distribution networks, except networks operated by local distribution companies ("LDCs"). Therefore, when renewing a concession agreement, ERDF does not compete with other operators. Nonetheless, the Group cannot guarantee that such provisions will not be modified by law in the future or will not be challenged before the Court of Justice of the European Communities or viewed to be in violation of European Law. In addition, the Group could not obtain the renewal of these contracts at the same economic terms (see in particular section 6.2.2.2.3 "Concessions", in particular the concession agreement entered into with the city of Paris, which shall expire on December 31, 2009).

In France, RTE-EDF Transport is both owner and operator of the public transmission system according to standard concession specifications signed by the Minister of Industry (decree n° 2006-1731 of December 23, 2006) (see section 6.2.2.1 "Transmission – RTE-EDF Transmission" and section 6.5.2.2 "French legislation").

Hydropower generation facilities of 4.5 MW or more are also operated under concessions awarded by the French State. Renewal of these concessions is now subject to a procedure of invitations to tender (see section 6.2.1.1.4.4 "Current and future hydropower generation issues"). In addition, the law on water dated December 30, 2006 eliminated the preferential right to renewal of the outgoing licensee and the decree n°2008-1009 dated September 26, 2008, the application of which is not effective as at the date of the present Document de Référence provides the conditions under which the concessions may be renewed. The EDF group cannot guarantee that it will be able to obtain the renewal of the concessions that it currently operates. If a concession is not renewed, the outgoing licensee will not under current rules, benefit from any indemnity. The rectifying 2006 Finance Law nonetheless provides for reimbursement subject to non-amortized expenditure incurred for modernization work or those for increasing production capacities. Nor can the EDF group guarantee that renewal of a concession will be obtained under the same economic terms as the initial concession. Such events could have a negative impact on its activities and financial results.

The Group also operates under electricity distribution or generation concessions in other countries where it is present (including in the United Kingdom, Germany and Italy).

Depending on the conditions in each of these countries, the transmission, distribution or generation concessions may not be upheld or be renewed in its favor, with changes in the economic conditions in the concession specifications, which would have a negative impact on the Group's activities and its financial results.

#### The Group must comply with increasingly restrictive environmental and public health regulations that are the sources of costs and potential liabilities.

The Group's activities are subject to regulations for the protection of the environment and public health, which are increasingly numerous and restrictive. These regulations relate to the Group's industrial activities, energies generation, transmission and distribution, as well as to energy supply and energy-related services, which must, for example, incorporate the concept of demand-side management in their offers (for a description of environmental, health and safety regulations applicable to the Group, and future regulations likely to have an impact on its activity, see section 6.5.4.4 "Other regulations relating to the environment, nuclear facilities, health, hygiene and safety").

In France, French Law n° 2005-781 of July 13, 2005, which defines energy policy guidelines (Loi de Programme fixant les Orientations de la Politique Energétique, or "LPOPE") (see section 6.5.2.2 "French legislation"), as amended and completed by the regulations in effect, contains certain energy saving provisions. The objective is to reduce, by an average of 2% each year by 2015, the final energy intensity, which is the ratio between energy consumption and the GDP. It was in this context that, for the period 2006-2009, the government set energy saving targets for energy suppliers. To meet this target, EDF has chosen to implement a program of several energy efficiency actions in all its markets with the goal of allowing EDF to comply with all of its legal and regulatory obligations, in particular regarding energy efficiency certificates (EEC). However, EDF can not guarantee that the actions taken by the Group in favor of controlling energy demand will be sufficient to achieve the goals set by the public authorities. As the 2006-2009 period ends, public authorities will set new objectives for the next three-year period. Such new objectives could be more demanding given the directions taken by the government under the "Grenelle de l'Environnement". That could have an adverse financial effect on the Group.

New European regulations relating to air quality (directive "Emission ceilings" (NEC), to be applicable in 2020) and to emissions of major combustion facilities (directive "IPPC – "Integrated Pollution Prevention and Control" to be applicable in 2016) are in preparation. New highly restrictive upper limits should also be created for some polluting products (NO<sub>X</sub>, SO<sub>2</sub>, Dusts, etc.) reflecting the environmental performance BAT ("Best Available Technologies") standards; the national scope for derogations from BATs included in the current IPPC directive will only be incorporated in the revised Directive as rare exceptions. Those revisions will most likely lead to additional environmental constraints, which may have an adverse effect on availability, competitiveness, renewal, or development of the Group's thermal generation fleet.

The Group may also be required to make significant investments to comply with the implementation and changes of the European directive dated October 13, 2003 relating to the greenhouse gas emission quota exchange system. The greenhouse gas emission directive (GHG) covers CO<sub>2</sub> quotas allotted free of charges in most Member States. For the 2008-2012 stage, National Quota Allocation Plans (PNAQ2) are, as a matter of principle, more restrictive than during the previous period. If the Group exceeded the amount of CO<sub>2</sub> emissions allowed under the CO<sub>2</sub> quotas allocated to it and needs to purchase further quotas, it could lead to significant additional expenditures compared to those provided for by the Group. The National Quota Allocation Plans (PNAQ2) adopted by France, after the approval of European commission, reduced the volume of quotas awarded from 155.6 Mt to 132.8 Mt a year, and results in an approximately 25% reduction in quotas awarded to the energy sector (including, in particular, production of electricity, gas transportation, refineries, etc.). In addition, the modified budget act (Loi de finances rectificative) for 2008 provides for a maximum reduction of 10% of the amount of quotas allocated to the electricity sector in 2009, 20% in 2010, 35% in 2011 and 60% in 2012. Furthermore, the expected developments of the GHG directive aim at broadening its scope to all GHG under the Kyoto Protocol (CH<sub>4</sub>, N<sub>2</sub>O, HFC, PFC, SF<sub>6</sub>) and to other sectors of activity, and at strengthening constraints in terms of reduction of GHG emissions from 2013. Finally, the European institutions aim to harmonize the rules for the allocation of GHG quotas, with a gradual transition from free allocation of allowances to their auction. These envisaged developments of the GHG directive, could lead to increased expenditure for the Group.

Furthermore, the European Commission published a directive proposal for the promotion of renewable energies on which a political agreement was reached in December 2008, which sets the objective of increasing the share of renewable energies in the total energy consumption from 8.5% in 2005 to 20% in 2020. This effort would be shared among the Member States which would be subject to a mandatory target for 2020 as well as interim targets (see section 6.5.4.5.1.1 "The Energy Package and climate change"). This new directive could lead Member States to implement legislation reinforcing the obligations of electricity producers to facilitate development of renewable energy, which should result in additional costs for the companies involved.

In addition, a French law concerning water and aquatic environments published on December 30, 2006 and the implementing decrees in force and to come are expected to affect in particular the tax regulation (i.e. increase of royalty payments to water agencies) and the operating conditions of EDF's facilities because of the increase of compensation water (i.e. minimum flow maintained in the downstream of dams to protect the aquatic life) which may reduce the hydroelectric generation (see section 6.5.4.4 "Other regulations relating to environment, nuclear facilities, health, hygiene and safety").

The Law n° 2008-757 dated August 1, 2008 relating to the environmental liability, ensures the implementation in France of directive 2004/35/CE dated April 21, 2004. The new rules are designed to facilitate the prevention and repair of environmental damages affecting waters, soils and biodiversity. The Law provides that for a number of activities entailing specific risks, it will be mandatory to take preventive measures. These activities are to be determined by a decree. In addition, in case of "severe damages" (to be specified by decree), the responsible operator will be obliged to take remedial measures allowing a return to the previous state of the natural environment. This new regime is likely to apply to the Group's main facilities, which could result in adverse financial effect on the Group and its activities. To cover this risk, EDF Assurances entered into an insurance policy, effective on July 1, 2008. The new rules do not modify the regime of liability to third parties which continues to apply.

Finally, the Group is also subject to regulations concerning polychlorobyphenils (PCBs) and polychloroterphenils (PCTs) in various countries where it carries out its activities, (see section 6.5.4.4 "Other regulations relating to the environment, nuclear faculties, health, hygiene and safety"). In Europe in particular, the regulations require processing of all polluted equipment before December 31, 2010. Failure to meet the deadline could expose the Group to significant legal actions.

Other current and future regulations in the environmental and health areas concerning the Group's activities or assets may also have a material, financial impact on the Group.

The Group may be found liable, even if it has not committed any fault or breached existing rules. The Group may also be found liable as a result of the fault or breach committed by entities which were not part of the EDF group at the time of damage, if the Group has since taken over their facilities.

Current rules, and future changes to such rules, have resulted and are likely to continue to result in an increasing level of operating expenses and investments in order to comply with such rules. The Group may even be required to close facilities that cannot be made compliant with new rules. Furthermore, other rules, which may be more restrictive or which may apply to new areas, and which are not currently foreseeable, may be adopted by the relevant authorities and have a similar effect.

In addition, external perception by stakeholders of the Group's policy on sustainable development could worsen, resulting in a deterioration of the Group's image and extra-financial rating.

#### The growth of an integrated European electricity market may be slowed by a lack of cross-border transmission system interconnections.

As described in section 6.3.1 ("Europe"), the growth of an integrated European electricity market is inhibited by a lack of cross-border interconnections. This situation limits exchange capacity between operators in different countries, namely the capacity to rapidly adapt the supply to the demand ("blackout risk"), and allows price differences to exist which would not be present in an efficient integrated European market. It also impedes the emergence of efficient operators with a European dimension as it limits the options for synergies between companies within a same group located on different sides of a border.

Although there are currently several projects to develop interconnections, their construction has nonetheless been slowed down, mainly by environmental, financial, regulatory and local acceptability considerations.

Therefore the absence of adequate interconnections between countries where the Group is based or their slow development may limit industrial synergies which the Group intends to achieve between its various entities or cause network interruptions in countries in which the Group is established, which could have a negative impact on its results, its business and prospects.

#### Repeated and/or widespread blackouts in France or in an area served by a Group subsidiary, in particular, if they are attributable to the Group, may have consequences for its activities, results and image.

The Group could be the source of repeated blackouts, or widespread blackouts (a widespread blackout occurred in Europe on November 4, 2006) or be involved in one, even if the causal event occurred in another network or was attributable to another player.

The causes of these electricity breakdowns vary: local or regional imbalance between electricity generation and consumption, accidental interruption to the power supply, cascaded interruptions (more difficult to overcome in a market with cross-border exchanges), interconnection problems at borders, lack of investment and difficulty in coordinating operators on an open market.

Such electricity supply breakdowns would first have an impact on the Group's sales. They may also result in repair costs for reconnecting the network and lead to investment expenditures if it were decided, for example, to install additional generation or network capacity. Finally, they would have a negative impact on the Group's image with its customers, in particular, if the blackouts proved to be attributable to it.

#### Natural disasters, significant climatic changes, or any major event on a scale that is difficult to predict, could have a material negative impact on the Group's industrial and commercial activities.

In France, the storms of December 1999 and the heat wave in the summer of 2003 and more recently the Klaus storm which crossed South-West of France on January 24, 2009, led to additional costs for the EDF group. In addition to these events, other natural disasters (floods, landslides, earthquakes, etc.), other significant climatic changes (droughts, etc.), or any other event on a scale that is difficult to predict (large epidemic diseases, etc.) could affect the Group's activities.

Based on its experience with the above events, the EDF group implements measures, that are aimed at allowing it to limit the consequences should such events be repeated. Accordingly, following the storms of December 1999, the Group initiated a program to secure its transmission and distribution networks. That program could be adapted following the analysis conducted with respect to the consequences of the storm of January 24, 2009. Following the heat wave in the summer of 2003, EDF drew up an "Unforeseen Climatic Events" plan in order to anticipate and prevent the consequences of such situations (as it was the case for the heat wave of summer 2006). The adoption of such measures can lead to costs in addition to those related to the cost of repairing the damage caused by the natural disaster and the loss of earnings corresponding to the interruption to supply.

The Group's aerial networks, including those owned by RTE-EDF Transport, are not covered for "damage to property". The specific coverage set up by the Group after the storms of December 1999 against storm risk for the portion of its aerial networks related to its distribution network (see section 4.1.3.3.2 "Storm cover") has expired in December 2008; as a result, the Group is currently considering alternative schemes. Owing to the absence of coverage, any damage to these aerial networks could have a negative impact on the Group's financial situation.

Finally, in the event of a wide-spread sanitary epidemic, EDF created and tested, in 2006, a plan which aims to assure the continuity of electricity supply, depending on the intensity of the crisis, and at the same time guarantee the safety of the facilities and reduce the sanitary risks to which employees are exposed. In November 2008, this plan was submitted to a second crisis exercise with the contribution of the Asia Pacific Division of EDF and EDF Energy.

The Group cannot guarantee however that the occurrence of a natural disaster, a significant climatic unforeseen event, or any other event on a scale that is difficult to predict will not have significant negative consequences on its activities, its profits and its financial situation.

#### Risks associated with climatic conditions and seasonal variations in the business.

Electricity consumption has a seasonal nature, and depends namely on climatic conditions. Accordingly, electricity consumption is generally higher during winter months. In addition, available generated electricity may also depend on climatic conditions: for example, low hydrolicity, or heat waves which inhibit generation due to the obligation to respect certain temperature limits for rivers in the downstream of the facilities.

The Group's profits consequently reflect the seasonal character of the demand for electricity and may be adversely affected by significant climate variations since the Group could have to compensate the reduction in the availability of economical generation means by using other means with a higher generation cost or by being required to access the wholesale markets at high prices.

#### The Group's activities are sensitive to economic cycles and to general economic conditions.

The Group's activities are sensitive to economic cycles and to general economic conditions within the geographical areas in which the Group operates. Any economic slowdown, in such areas, would lead to a drop in energy consumption, investments and industrial production by the Group's customers, and, consequently, would have a negative effect on the demand for electricity and the other services offered by the Group, which could have a significant adverse effect on the Group's activities, profits and prospects, as well as on the implementation of its development strategy.

The Group cannot guarantee that the global financial crisis that commenced in autumn 2008 and any economic downturn effects in 2009 and beyond in the geographical areas in which it operates, especially in France, will not have a significant adverse impact on its activities, operating profits, financial situation or prospects.

#### Technological choices implemented by the Group may be outperformed by new technologies.

The Group's activities are based on a certain number of technological choices, which may be outperformed by other technologies that prove more efficient, more profitable or even more reliable than those used by the Group. The use of these technologies by the Group's competitors could have the effect of reducing or eliminating the competitive advantage that the Group has through some of its technologies, and thus have a negative impact on its activities, financial results and prospects.

#### The occurrence of work-related illnesses or accidents cannot be excluded.

Although the Group does its best to comply with the laws and regulations concerning health and safety in the different countries in which it operates, and considers to have taken measures intended to ensure the health and safety of its employees and those of its subcontractors, the risk of workrelated illnesses or accidents cannot be excluded. The occurrence of such events may lead to lawsuits against the Group and the payment of damages, which may prove material.

For a description of the measures taken by the Group with regards to ionizing radiation, see section 6.2.1.1.3.2 "Environment, safety and radiation protection".

Regarding asbestos, the Group has taken measures to treat materials containing asbestos, provide information and install protection, as described in section 17.7 ("Health and safety — Quality of working life"). For a description of ongoing legal proceedings, see section 20.5 "Legal and arbitration proceedings".

#### The Group is exposed to risks on the wholesale energy and CO<sub>2</sub> emission allowances' markets.

The Group operates in the deregulated energy markets (mainly in Europe) through its generation, marketing and distribution activities. As such, the Group is exposed to price fluctuations in the wholesale energy markets (electricity, gas, coal, oil) as well as in the CO<sub>2</sub> emission allowances market. These fluctuations have been particularly important in the current context of major tensions and volatility on the energy markets.

The Group manages its risk exposure by buying and selling on the wholesale markets and through long-term contracts. Apart from the oil products markets, these are new markets that are still developing. Therefore, a shortage of products or lack of depth can limit the Group's capacity to cover its exposure to risk in the energy market. In addition, these markets remain in part partitioned by country, as a result, among other things, of the lack of interconnections. They may thus experience significant increases or decreases in price movements and liquidity crises that are difficult to predict. Such fluctuations may have a significant unfavorable impact.

The management of energy market risks is in line with the energy market risks policy adopted by the Group (see section 4.1.1.2 "Management and control of energy market risks"). The Group hedges its positions on these markets through derivative products such as futures, forwards, swaps and options negotiated on organized or over-the-counter markets. However, the Group cannot guarantee total protection, in particular, against significant price movements, which could have a material negative impact on its financial results.

#### The Group is exposed to variations in the prices and in the availability of materials or services (other than fuels) which it buys for the carrying out of its activities.

In a context of a significant and long-standing increase in raw material prices, the Group could face a sharp and sustained increase in the costs of certain critical products or services. Moreover, this increase could lead to a reduction of the offer if certain suppliers were forced to reduce their profit margins. Certain products or services are increasingly demanded, which could have an effect on their availability, in particular, products used for gas-fired combined cycle power stations, wind turbines and products and services in the nuclear field.

#### The Group is exposed to financial risks.

Because of its activities, the EDF group is exposed to financial risks:

- liquidity risk which has been particularly heightened in the current context of major tensions on the financial markets; In addition, as customary on the energy or financial markets, a margin call system has been established by certain entities of the Group in order to reduce or, if possible, eliminate the counterparty risk. Such system could lead the Group to mobilize liquidities due to current strong volatility on the energy and financial markets;
- exchange rate risk related to holdings in subsidiaries operating in currencies other than the euro, or to supply, in particular fuel and material, denominated in such currencies;
- equity risk, in particular related to equity instruments held as part of the management of assets constituted to cover the costs of EDF's long-term commitments in the nuclear business and obligations related to pensions and other employee benefits and, to a lesser extent, to the shares held in

the framework of cash management activities. The 2008 financial crisis led to a significant decline of the value of equity securities and a higher volatility in stock markets (regarding the decision of EDF to suspend the allocations to dedicated assets, see risk factor entitled "Dedicated assets reserved by the Group to cover the costs of the Group's long-term commitments in the nuclear business (such as radioactive waste and decommissioning) may prove insufficient.");

- interest rate risk related to the Group's financing and cash management activities and to the value of the Group's financial assets and liabilities; the interest rate risk lies in particular in portfolios of debt instruments held as part of the management of dedicated assets constituted to cover the costs of the Group's long-term commitments in the nuclear business and obligations related to pensions and other employee benefits;
- counterparty risk inherent in contractual relationships; the monitoring and reporting procedures applied by the Group in connection with its exposure to counterparty risk were strengthened in 2008 following, in particular, the bankruptcy of Lehman Brothers, which had however a limited impact on the Group.

The organization and management principles of these risks are described in section 4.1.1.3 ("Management and control of financial market risks") and their measures of control are described in section 9.10.1 ("Financial risks management and control"). However, the Group cannot guarantee total protection, including in the event of continued significant movements in exchange rates, interest rates and equity markets like those seen in 2008.

## 4.2.3 Specific Risks relating to the Group's **Nuclear Activity**

The EDF group is the world's leading nuclear operator. Nuclear electricity represents over 80% of its generation in France. EDF acquired in early 2009, nuclear assets in the United Kingdom, and operates nuclear power plants in Germany through EnBW: the nuclear share in the Group electricity mix is hence a major competitive advantage. Any event negatively affecting the nuclear business is likely to have greater consequences for the Group's image, activities, productivity, financial situation and results, than for those of its competitors, which generate proportionally less electricity from this source of energy.

#### Due to its nuclear activities, the Group is exposed to substantial liability risks and possibly significant additional operating costs.

Even if the Group has implemented risk control strategies and procedures corresponding to high standards for its nuclear activities, such activities, by their nature, still present risks. Therefore, the Group may face considerable liability as a result of, among others, incidents and accidents, breaches of security, ill-intentioned acts or terrorism, air crashes, natural disasters (such as floods or earthquakes), equipment malfunctions or mishandling in storage, handling, transportation, treatment or conditioning of substances and nuclear materials. Such events could have serious consequences, especially in case of radioactive contamination and irradiation of the environment, for persons working for the Group and for the general population, as well as a material, negative impact on the Group's activities, strategy, outlook and financial situation.

A nuclear operator assumes liability for the nuclear safety of its facilities. The liability scheme that applies to European nuclear facilities operators, and the associated insurance, are described in sections 6.5.4.2 ("Special regulations applicable to nuclear facilities") and 4.1.3.4.1 ("Civil liability"). This scheme is based on the principle of strict liability for the operator. If there is an event which causes damage, the Group would be automatically liable within the limits of a financial ceiling established by applicable local

law, regardless of the source of the event that caused the damage. The implementation of safety measures does not exonerate the Group from this type of liability.

The Group cannot guarantee that, in countries where it operates nuclear facilities, the liability ceilings established by law will not be increased or removed. For example, the Protocols amending the Paris Convention and the Brussels Convention, currently being ratified, provide for these ceilings to be raised. In addition, the Group cannot guarantee that the insurance policies covering this liability will always be available, or that their cost will not increase from their present level, or that the Group will always succeed in maintaining these insurance policies.

Finally, damage to EDF's nuclear facilities is covered by an insurance policy (see section 4.1.3.4.2 "Damage insurance for nuclear facilities").

Despite this coverage, any event that would cause significant damage to a Group's nuclear facility could have a negative impact on the Group's business, financial results and financial situation.

#### A serious nuclear accident occurring on a facility which does not belong to the Group may have material consequences for the Group.

Despite the precautions taken during their design or operation, a serious accident on a facility which does not belong to the Group cannot be excluded and could result in public rejection of the nuclear business and lead to the competent authorities deciding to tighten noticeably operating conditions of power plants, or to cease the generation of electricity through nuclear means (and therefore suspend or cancel projects of development of nuclear power plants), or to cease authorizing, temporarily or permanently, operation of one or more nuclear plants. Such decisions cannot might be taken even in the absence of an accident taking place. Such accident, if occurring close to one or several facilities of the Group, could also have the effect of contaminating their environment, and thus jeopardize their operation.

Such events would have a material, negative impact on the economic model, strategy, business, profit, financial situation and prospects of the

#### The nuclear activity of the Group is subject to particularly detailed and restrictive regulations that may increase in severity.

The nuclear activity of the Group is subject to detailed and restrictive regulations, in particular in France, with a system for the monitoring and periodic re-examination of operating authorizations, which primarily take into account nuclear safety, environmental and public health protection, and also national safety considerations (terrorist threats in particular). These regulations may be subject to significant tightening by national and European authorities (for a description of the "nuclear package" and the French Law relating to transparency and safety in the nuclear field, see section 6.5.4.2 "Specific regulations applicable to nuclear facilities").

Furthermore, a tightening of regulations or any non-compliance with the regulations in force could result in a temporary or permanent shut-down of one or more nuclear plants.

This could result in material increased costs of the Group's nuclear fleet, which would have a negative impact on its financial situation.

#### For its nuclear activity, the Group depends on a limited number of contractors.

Even though the Group operates a supplier diversification policy within its nuclear business, it is currently dependent on a limited number of contractors and suitably qualified and experienced contract personnel.

This situation:

- limits competition on markets on which EDF acts as buyer; and
- creates for the Group a risk of exposure to failure of one or more of these suppliers or specific skills.

This could have a negative impact on the Group's results and financial situation.

#### The Group is exposed to variations in uranium procurement conditions and conversion and enrichment services conditions.

Nuclear fuel purchases are part of the Group's operating costs.

For its nuclear power fleet in France, EDF purchases uranium, conversion services and enrichment services through long-term contracts containing hedging mechanisms against price movements allowing it to reduce the impact of the price fluctuations. The main supplier is the Areva group, but EDF is pursuing a policy of diversification by buying supplies from other producers (see section 4.3 "Dependency factor" and section 6.2.1.1.3.4 "The nuclear fuel cycle and related issues"). Prices and available quantities of uranium and conversion and enrichment services are subject to fluctuations resulting from factors, mainly political and economic, which the Group cannot control (in particular, increased demand in the context of worldwide expansion of nuclear energy or shortages linked, for example, to an operating accident in a uranium mine).

In the United Kingdom, British Energy implements a policy to ensure the availability of a minimum quantity of two year's supply of nuclear fuel required for the operation of its power plants.

The Group cannot guarantee that its supply contracts will protect it completely against drastic or significant price increases, despite integrating the diversification policy and the protection mechanisms referred to above. It cannot guarantee that when these long-term contracts expire, it will be able to renew them, in particular, at price conditions that are equally favorable.

Notwithstanding the moderate role that uranium supply costs play in the generation costs for nuclear power and the delay of several years between buying uranium and using it in a power plant, drastic and significant variations in the price of uranium may have a negative impact on the Group's financial results.

#### Risks relating to the transportation of nuclear fuel.

The transportation of new or used nuclear fuels is an operation that requires special and restrictive safety and security measures. These constraints could increase further, generating additional difficulties and costs for the Group. Furthermore, several factors that are outside of the Group's control (such as opposition by local residents or anti-nuclear associations, for example, in the form of demonstrations to prevent nuclear material from being moved) may slow these operations. The operation may even be interrupted, in particular, in the event of an accident. As a result, the Group may be required to slow or interrupt some or all of the generation on the affected sites, due to either the non delivery of new fuel assemblies, or the saturation of storage facilities on the sites, which could have a negative impact on the Group's financial results.

#### The nuclear fleet operated by the Group could require heavy and/or costly repairs or modifications

The fleet of nuclear facilities currently operated by the Group in France is highly standardized (see section 6.2.1.1.3.1 "EDF's nuclear fleet"). This represents an advantage for the Group: it allows the Group to achieve economies of scale in equipment purchases and engineering, to apply improvements made to its newest power plants to its entire fleet, and to anticipate, in the event of a malfunction in a facility, the measures to be taken in the others

However, this standardization carries the risk of a malfunction that is common to several power plants or series of power plants. The Group is currently addressing certain technical issues across its fleet that have affected the availability factor Kd in 2007 and 2008 (see section 6.2.1.1.3.3 ("Performance of the nuclear fleet")). The Group cannot guarantee that it will never again be confronted with other burdensome or costly repairs or modifications, to be carried out on all or part of the fleet, or that events will not occur which may have an impact on the operation of the fleet or its output, bringing about a temporary outage or closure of all or part of the fleet.

The Group also operates nuclear power plants elsewhere in Europe (including UK and Germany). It may also face costly repairing works or modifications to be made on these units or events which could have impacts on their performance, output or availability. Despite maintenance work carried out by the Group on its power plants, it is possible that the output availability of certain units will be limited, particularly due to the ageing of equipment and component obsolescence.

Despite maintenance work carried out by the Group on its power plants, it is possible that the output availability of certain units will be limited, particularly due to the ageing of equipment and component obsolescence.

Such events may have a negative impact on the Group's financial results and its activities.

#### The Group may not be able to operate its nuclear power plants over a period at least equal to the period used for the calculation, in particular, of amortization and provisions

In France, EDF estimates that a operating life of 40 years is now technically achievable due to the measures taken and resources used to achieve this objective. EDF follows a high-level R&D policy relating to the long-term behaviour of materials. In addition, the maintenance and investment policy has been adapted to improve the degree to which it takes into account risk and knowledge of ageing phenomena. EDF believes that operation over an even longer period is feasible, in light of the extended operating life agreed to by the competent authorities in the United States for nuclear facilities using similar technology (PWR).

However, EDF's ability to operate its nuclear facilities over a period of 40 years or longer is subject to authorizations by safety authorities, in particular, at the time of in-depth safety inspections every 10 years. In 2009, the first two of the Group's facilities to reach 30 years of age (Tricastin 1 and Fessenheim 1) will have their third run of inspections, at which time authorizations for a 40-year operating life for such facilities will be requested. Although the corresponding safety referential has been already analyzed by the French Nuclear Safety Authority, the Group cannot guarantee that it will obtain the necessary authorizations at the appropriate time, or that such authorizations will be obtained, or that it will not be subject to conditions requiring the Group to carry out significant expenses or investments.

Nonetheless, the Group has based its assumptions for calculating accounting impacts linked to the operating life of its nuclear fleet in France on an operating life of 40 years (including depreciation and amortization and provisions, etc.). If the safety authorities opted for the closure of some units or power plants before 40 years, this would require accelerated replacement of the corresponding generation capacity by additional investments or recourse to electricity purchases on the market. It would also be necessary to review the depreciation and amortization plan to reappraise the residual operating life of the power plants in question. This would have a material adverse impact on the Group's financial results and financial situation.

In addition, in order to postpone the commissioning of replacement units and the related investments, and to continue to benefit from the cash flows from its existing fleet, the Group aims to lengthen the operating life of its nuclear fleet beyond 40 years in France and intends to submit to the French Nuclear Safety Authority the contents of a safety referential for operating the nuclear fleet beyond 40 years. Should the French Nuclear Safety Authority grant the clearance, the referential would be implemented during the fourth 900 MW ten-year inspections (such inspections are scheduled to start in 2019) and the third and fourth 1,300 MW ten-year inspections (third round inspections are scheduled to start in 2015 and fourth round inspections in 2025). The Group cannot guarantee that it will obtain such extensions or that such extensions will not be obtained subject to specific conditions, which would have a material adverse impact on the Group's ability to carry out its investment strategy.

In the United Kingdom, the current operating life of the power stations in British Energy's existing nuclear fleet ranges between 30 to 40 years, depending on the power plant (see section 6.3.1.1.3.2 ("British Energy's Activities" – Stations' operating lives). The potential lifetime of each of the power stations is determined primarily by the technical and economic practicability of supporting an agreed safety case for that power station in accordance with its nuclear site licence. Any decision by British Energy to extend the operating life of a power station beyond its current scheduled closure date would be based, in large part, on a combination of economic factors and the engineering judgments reached in respect of technical and safety issues.

The adequacy of the safety case for each power station is confirmed at each statutory outage for the following period by undertaking appropriate inspection, maintenance and testing of the plant and reviews of its operating performance. The results are reported to the Nuclear Installations Inspectorate (the "NII"), which must give its formal consent under the nuclear site licence before the reactor concerned may be restarted. Under this regime a reactor may only be operated following restart during the period determined by the safety case. This period is normally three years for all "Advanced Gas-cooled Reactor" ("AGR") power stations and two years for the "pressurized water reactor" ("PWR") power station. In addition, every ten years British Energy is required to undertake a periodic safety review (PSR) for each power station.

Furthermore, given that certain costs relating to spent fuel management and decommissioning will be borne by the Nuclear Liabilities Fund and/or the UK Government under the agreements entered into in 2005 as part of the restructuring of British Energy (see section 6.3.1.1.3.2 ("British Energy's Activities" – Restructuring Agreements – Costs relating to radioactive waste management and decommissioning), lifetime extensions would be subject to the consent of the Nuclear Decommissioning Authority ("NDA") if the extension will result in an increase in the costs of discharging liabilities. The NDA is obliged to consent if it can be demonstrated that any economic benefits to the Nuclear Liabilities Fund, an independent trust set up by the UK Government as part of the restructuring of British Energy, or the Secretary of State deriving from the extension are reasonably likely to exceed the corresponding increase in costs.

The Group cannot guarantee that British Energy will obtain the necessary authorizations and approvals at the appropriate time or that such authorizations or approvals obtained will not be subject to conditions requiring the Group to incur further expenses or investments.

British Energy has based its accounting assumptions for the existing British Energy fleet (including depreciation, amortisation and provisions) on the current operation lifetimes of the stations (see table in section 6.3.1.1.3.2 ("British Energy's Activities" – Stations' operating lives). If any power stations had to be closed before the end of their accounting lives, this may require accelerated replacement of the corresponding generation capacity by additional investments or recourse to electricity purchases on the market. It would

## Risk factors

also be necessary to review the depreciation and amortization profile and associated decommissioning provisions to take into account the reduced operating lifetime of the power stations. This could have a material adverse impact on the Group's financial results and financial position.

In addition, in order to continue to benefit from the cash flows from its existing fleet, British Energy's strategy has been to seek to lengthen the operating life of its nuclear fleet beyond the currently scheduled periods and has already announced and taken into account life extensions comprised between 5 and 15 years (depending on each station) (see table in section 6.3.1.1.3.2 ("British Energy's Activities" – Stations' operating lives). The Group cannot guarantee that technical and economic factors will allow it to achieve such life extensions in the future.

#### Construction of the EPR in Flamanville could encounter problems or not be completed.

The Group is involved in the carrying out of the construction of the European Pressurized water Reactor ("EPR") in Flamanville (see section 6.2.1.1.3.5 "Preparing for the future of the nuclear fleet") in order to renew its fleet of nuclear generating facilities in France and to serve as a model for the construction of new facilities internationally.

#### However:

- the Group might not obtain or see called into question by court rulings, the necessary authorizations required for the construction, commissioning and operation of the Flamanville EPR;
- with regards to a first-of-a-kind reactor, technical difficulties or other difficulties could occur during its development and construction and during the early stages of its operation. These difficulties could slow or hinder the construction of the Flamanville EPR and its commissioning or affect its
- the global construction cost and the total cost of production of the EPR reactor could be higher than the estimates of EDF, because, among others, of increased raw materials prices, the evolution of exchange rates, the impact of price index provided in the contracts, technical and regulatory developments and the adjustment of provisions for risks (for the description of the increase of the estimated cost of the EPR in Flamanville, see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet" – "B - The European Pressurized water Reactor ("EPR") and associated challenges).

The EPR program for renewal of the fleet of generation facilities is strategic for the Group's future. Any event leading to delay or clogging of this program, or affecting, the construction, of the first-of-a-kind EPR or subsequent units would thus have a material adverse impact on the Group's activity and financial situation.

#### The Group remains liable for most radioactive waste from its nuclear power plants, especially long life, high-level waste from spent fuels.

The nuclear fuel cycle is described in section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues"). In France, as described in this section, as an operator and producer of waste, EDF is legally responsible for spent fuels from the moment they leave the power plant, during their processing operations and during their long-term management, and it assumes this responsibility in accordance with guidelines set forth by public authorities and under their control.

In particular, as a nuclear operator or producer, the Group may incur liability resulting from applicable regulation of waste in the event of an accident and damage to a third party or the environment through these burnt fuels or waste, even if they are handled, shipped, owned, warehoused or stored by operators other than the Group (especially, in France, the Areva group and ANDRA), in particular in the event of failure of such operators.

If the Group were acknowledged as responsible for damages caused to third parties and/or the environment, the specific civil strict liability scheme applicable to nuclear operators would apply, within the ceilings specified by this scheme (see section 6.5.4.2 "Special regulations applicable to nuclear facilities").

In France, long-term radioactive waste management was the subject to several initiatives undertaken in the framework of the French "Bataille" Law, and the passing of program Law n° 2006-739 dated June 28, 2006 relating to the sustainable management of radioactive materials and waste (see section 6.2.1.1.3.4 "The nuclear fuel cycle and related issues"). The Group cannot guarantee that all long-life high and medium activity waste will constitute "ultimate radioactive waste" in the sense of Article 6 of the Law n° 2006-739, and that as a consequence this waste will be able to be directly stored in deep geological layers. The Group also cannot guarantee how long it may take for the public authorities to authorize such storage, which continues to result in ongoing uncertainties with respect to waste, liability and the costs that could result for EDF.

In the United Kingdom, British Energy has entered into a contract with the Nuclear Decommissioning Authority, for management of Advanced Gascooled Reactor power stations ("AGR", i.e., Dungeness B, Hartlepool, Heysham 1, Heysham 2, Hunterston B, Hinkley Point B and Torness) spent fuel loaded from  $15^{\mbox{\scriptsize th}}$  January 2005 and has no responsibility for this fuel after it is transferred to a treatment site at Sellafield. In addition, under British Energy's restructuring arrangements, costs for the management of spent fuel at the Sizewell power station will be paid for from the Nuclear liabilities Fund and, should the Fund be insufficient, these costs would be underpinned by the UK Government (see section 6.3.1.1.3.2 ("British Energy's Activities" - Restructuring Agreements - Costs relating to radioactive waste management and decommissioning).

Costs related to the management of AGR waste from spent fuel loaded prior to 15<sup>th</sup> January 2005, will be borne, subject to a cap of £2.185 billion, to the UK Government under the "Historic Liabilities Funding Agreement", which was entered into as part of British Energy's restructuring arrangements (see section 6.3.1.1.3.2 ("British Energy's Activities" - Restructuring Agreements – Costs relating to radioactive waste management and decommissioning). It cannot be guaranteed that this sum will be sufficient to manage all AGR waste from spent fuel loaded prior to 15th January 2005. In addition, technical and legal responsibility (under the Nuclear Site Licence and the Radioactive Substances Act) for the management, storage, and eventual disposal of historic spent AGR fuel (i.e., AGR waste from spent fuel loaded prior to 15<sup>th</sup> January 2005), operational and decommissioning, intermediate and low level waste, and Sizewell spent fuel remains with British Energy, as does financial liability for operational low level waste.

Generally, the Group cannot guarantee that it will have at its disposal, in due course and under acceptable financial conditions, long term storage and treatment solutions for the radioactive waste resulting from the operation of power plants located in the relevant countries, including, in the UK, in respect of the radioactive waste for which British Energy retains liability.

The occurrence of any of these events would have a negative impact on the Group's financial results and financial situation.

#### The provisions made by the Group for spent fuel processing operations and long-term radioactive waste management could prove insufficient.

EDF has made provisions for management operations (transmission, processing, conditioning for recycling) of spent nuclear fuel (see note 32.2 to the 2008 Consolidated Financial Statements) using the price and volume conditions in the agreement signed with Areva in December 2008 which

covered the period from 2008 to 2012. The amount of provisions to cover the period beyond 2012 could prove insufficient if the renewal conditions of this agreement for such future period proved more onerous than those currently applicable.

EDF had made provisions for long-term waste management based on an assumption of geological storage, and the conclusions reached in 2006 by the working group comprising ANDRA, public authorities and producers of nuclear waste (see note 2.2 to the 2008 Consolidated Financial Statements, and section 6.2.1.1.3.4 "The nuclear fuel cycle and related issues – B. Back-end"). If the program Law n° 2006-739 of June 28, 2006 relating to the sustainable management of radioactive materials and waste reinforces, without excluding other fields of complementary research, that the "ultimate radioactive waste" must be stored in deep geological layers, the Group cannot guarantee that all long-life high and medium waste will be considered as such and nor the length of time in which this type of storage, if it was held, could be carried out. In consequence, the final cost of longterm waste management of the Group could exceed the provisions made in its accounts.

EnBW has also made provisions for long-term waste management commitments. The Group cannot guarantee that the amount of these provisions will be sufficient.

The evaluation of these provisions is sensitive to the assumptions made in terms of costs, inflation rate, long-term discount rate and payment schedules. Given these sensitivity factors, changing the parameters may lead to a significant revision of the provisions accounted for.

If such was the case, the inadequacy of the provisions for these commitments may have a material negative impact on the Group's financial results and financial situation.

#### Decommissioning of the existing fleet of nuclear facilities may present currently unforeseen difficulties or be much more costly than currently expected.

The decommissioning of the EDF and EnBW nuclear fleets is described in section 6.2.1.1.3.6 ("Decommissioning of nuclear power plants") and 6.3.1.2.3.1 ("Electricity businesses"). Given the size of the Group's nuclear fleet, its decommissioning represents a highly technical and financial challenge.

While the Group has evaluated the challenges, in particular technical, which this decommissioning brings (particularly the decommissioning of first generation power plants) and has identified the solutions to be developed, it has never dismantled nuclear power plants similar to those currently in service. The Group has made provisions to cover the costs associated with decommissioning and last cores.

EnBW must also decommission its power plants and has made provisions for this.

The evaluation of these provisions is sensitive to the assumptions made in terms of costs, inflation rate, long-term discount rate and payment schedules. Given these sensitivity factors, changing the parameters may lead to significant revision of the provisions accounted for.

The Group cannot guarantee that the provisions made will be sufficient. Their insufficiency would have a negative impact on the Group's financial results and financial situation.

In the United Kingdom, under British Energy's restructuring arrangements, the decommissioning costs from the British Energy's existing nuclear power stations will be paid for from the Nuclear liabilities Fund and, should the Fund be insufficient, these costs will be underpinned by UK Government (see section 6.3.1.1.3.2 ("British Energy's Activities" -Restructuring Agreements – Costs relating to radioactive waste management and decommissioning).

#### Dedicated assets reserved by the Group to cover the costs of the Group's long-term commitments in the nuclear business (such as radioactive waste and decommissioning) may prove insufficient.

As of December 31, 2008, the market value of the portfolio of dedicated assets for EDF was approximately €8,658 million for EDF against 8,604 million at December 31, 2007 (see section 6.2.1.1.3.6 "The decommissioning of nuclear power plants – Assets available to cover long-term nuclear power-related commitments (operating cycle excluded)"). These assets are built up gradually on the basis of spending estimates and the timeframe which the Group will have to meet.

In September 2005, EDF decided to accelerate the constitution of these dedicated assets to cover the whole basis at the end 2010. The Law of June 28, 2006 relating to the sustainable management of radioactive materials and waste supported this decision, since it imposes a total cover of long-term nuclear commitments on nuclear operators, (excluding operating cycle) within a five-year period of time after the law came into force. Furthermore, each operator is obliged, since 2007, to provide every three years a report, updated each year, supporting in particular the expenses relating to the decommissioning of nuclear power plants, the calculation methods of said provisions and the constitution of consequent dedicated assets to the relevant administrative authority. In addition, the decree dated February 23, 2007 and the order of March 21, 2007 have specified the process for financial securitization of the nuclear expenses by establishing an indexation of the totality of such charges, by distinguishing those relevant to the operating cycle, setting a framework for their evaluation as well as the discount rate retained by nuclear plant operators to calculate provisions pertaining to it. These texts set the rules of investment and management for the dedicated assets and organize the role of the Group's management, as well as the control plan to be implemented by the nuclear plant operators (see section 6.2.1.1.3.6 "The decommissioning of nuclear power plants – Assets available to cover long-term nuclear power-related commitments (operating cycle excluded)").

EDF's dedicated assets may, nonetheless, be judged insufficient according to the June 28, 2006 law's implementation regulations or by the administrative authority, and lead to adjustment measures (in particular complementary allocations for the dedicated assets). These dedicated assets can also prove to be insufficient at the moment of actual payment, if actual costs are appreciably different or if the disassembly and storage costs schedule is modified. This would have a material, negative impact on the Group's financial situation. Moreover, stricter national (in particular those which could have an impact of the basis of the dedicated assets to be constituted by EDF) or European regulatory constraints may lead to increasing demands for the constitution of dedicated assets and have an effect on EDF's financial situation.

Finally, these assets are constituted and managed in accordance with strict, prudential rules (see section 6.2.1.1.3.6 "The decommissioning of nuclear power plants – Assets available to cover long-term nuclear power-related commitments (operating cycle excluded)"). The Group cannot, however, guarantee that variations in the financial markets will not have a material, negative impact on the value of these assets (see section 9.10.6 "Financial risk on EDF's dedicated assets management portfolio" for a sensitivity analysis). The sharp drop in financial markets in 2008 has adversely affected the value of these assets and given the decline and the strong volatility in stock markets, it was decided in September 2008 to suspend

allocations to the portfolios of dedicated assets until market conditions have stabilized. Once reinitiated, further allocations shall therefore be adjusted in order to comply with current regulations which impose a full coverage, of the relevant commitments by the dedicated assets portfolio by the end of June 2011, instead of by 2010 as contemplated in 2005.

## 4.2.4 Risks related to the Structure and Changes within the Group

It is possible that the Group's development strategy cannot be implemented in accordance with the goals defined by the Group.

The Group may fail to implement international nuclear generation projects to which it is committed or may not be able to implement such projects under satisfactory economic, financial and legal conditions.

The EDF group is committed through partnerships or equity investments to international projects for the construction and operation of nuclear power plants (in the United States, the United Kingdom, China, etc.). During the development phase, these projects require obtaining administrative authorizations, licenses, permits and, in certain cases, the setting of additional partnerships. These are large-scale construction sites calling for substantial investment. The financing conditions have yet to be confirmed and, given the current economic context, such financing could be delayed. Furthermore, the regulatory framework in some countries is in the process of being updated, which could have an impact on the Group's commitments and liability. Even with the benefit of protective contractual arrangements, the Group cannot guarantee that any or all of these projects will be implemented in accordance with scheduled timeframes, under satisfactory economic, financial or legal conditions or that they will, in the long term, generate the profitability initially anticipated. This could have a negative impact on the Group's image and financial situation.

The implementation of the gas strategy may face significant problems.

Development of the Group's gas business is an important issue, both with respect to the use of gas in electricity generation and the development of dual gas/electricity offers. Furthermore the competitive environment is evolving in France and in Europe with the emergence of new players or mergers of energy companies.

Demand for gas in Europe is growing and there are significant quantities of untapped reserves throughout the world. However, sources of supply are remote and capacities for gas transport (by gas pipeline or by liquefied natural gas (LNG) tanker), LNG terminals and capacities for storage are still limited. To implement its gas strategy, the Group must not only have access to competitive sources of supply, but also to logistical infrastructures (such as storage, gas pipelines and LNG terminals) that allow it to transport its gas to areas close to points of consumption and to produce synergies between its different entities (including those which it does not control).

The Group cannot guarantee that it will be able to either access these gas assets, or acquire them or participate in their development, or achieve the expected synergies, under acceptable financial conditions.

Any one of these factors could slow the development of the Group's gas strategy, which would have a negative impact on its activities, its financial results and its prospects.

In addition, the Group intends to develop and consolidate its offer of service integrated solutions, in particular its energy eco-efficiency services, to increase sales per customer as the energy market in Europe opens up to competition and to deal with issues relating to energy efficiency and sustainable development.

The energy-related services market is very competitive, and the energy efficiency market possesses a strong potential for development. The Group cannot guarantee that its energy-related services offer will continue to grow successfully.

If the Group cannot implement its development policy in the area of energy-related services, this may have a negative impact on its financial results and prospects.

The Group intends to continue its development in the electricity industry in France and abroad, in line with its industrial project, depending on its business model in each area and in light of any relevant experience (upstream/downstream balance, commercial strategy, development of renewable energy sources or in other production methods: nuclear, hydropower, coal, gas combined-cycle, etc.). It is thus implementing programs for re-organization, increasing profitability, (see risk factor entitled "The Group has implemented programs to improve its operating and financial performance and to reinforce its financial flexibility") and disposals.

More generally, the Group may be confronted with an unexpected change in the regulatory, economic and competition framework which may render its decisions inadequate, or may encounter difficulties in implementing or changing its strategy. The Group may be led to acquire or develop assets which ultimately do not generate the profitability initially anticipated. The Group may also find that it has been unable to make the investments, equity investments and disposals it expects to make, or that it has made them at a price different to that desired, due in particular to financial, regulatory or contractual constraints, or even political acts outside France. This may have a negative impact on the Group's financial results, financial situation and prospects.

#### Risks related to the acquisition of British Energy

On January 5, 2009, the Group acquired, by takeover bid, British Energy for approximately £11,998 million, excluding remaining shares outstanding and costs related to acquisition (see note 4.1 to the 2008 Consolidated Financial Statements and section 6.3.1.1.3.1 ("Offers").

The acquisition of British Energy may not, or may take more time than expected to generate the anticipated synergies, cost savings, operational benefits and new nuclear build opportunities (see section 6.3.1.1.4 ("Integration")), which could have a significant adverse impact on the Group's activities, operating profits, financial situation or prospects.

In addition, the commitments made to the European Commission in relation with the competition issues raised by the acquisition (see section 6.3.1.1.4 ("Offers")) may be implemented by the Group under conditions less favourable to the Group than anticipated, which could have a significant adverse impact on the Group's profits or financial situation.

Moreover, if significant difficulties arise with regard to the quality and performance of British Energy's industrial assets or if British Energy's financial situation and/or prospects are not consistent with the assumptions on the basis of which the transaction was valued by the Group, including in particular the anticipated evolution of wholesale power prices in the United Kingdom and of the output of British Energy's existing nuclear fleet, this may have a significant adverse impact on its profits and financial situation, including through impairment costs the Group may have to incur.

Although the Group carried out due diligences (including technical, legal, financial and environmental due diligences) prior to the launch of the takeover offer, it cannot be excluded that certain liabilities of British Energy remain unknown or underestimated, which could have a significant adverse impact on the activities, the financial condition, the results and/or the prospects of the Group.

British Energy and its affiliated companies are parties to supply agreements, joint venture agreements, license or concession agreements or other agreements, including agreements entered into with the British Government in 2004 and 2005 as part of the financial restructuring plan of the British Energy group, that could be called into question as a result of the acquisition by the EDF group (either by the other parties to such agreement, in particular as a result of the implementation of a change of control provision triggered by the acquisition, or by public authorities). Change of control provisions generally allow or permit the termination of the agreement by either party upon a change of control of the other party or, when contained in financing contracts, the early repayment of the outstanding amount or the constitution of guarantees. These provisions may be however waived and the Group is in the process of identifying any cases in which such waivers will be sought. In the absence of a waiver, the implementation of a change of control provision could lead to the loss of contractual rights and benefits, the termination of joint venture agreements or contracts of license or concession, or to the renegotiation of financing contracts.

Furthermore, the Group incurred a syndicated loan of approximately £11 billion in order to partially finance the acquisition of British Energy under which it is obliged to allocate significant resources to the reimbursement of its debt. This could limit the Group's financial flexibility and the possibility of obtaining further loans in the context of its development and investment strategy.

#### Risks related to the acquisition of certain nuclear activities of **Constellation Energy**

The Group entered into an agreement on December 17, 2008 with the U.S. electrical company Constellation Energy (CEG), according to the terms of which the Group will acquire 49.99% of Constellation Energy's nuclear generation and operation business for approximately \$4.5 billion. In the context of this agreement, the Group has already made or shall make several key investments to strengthen CEG's liquidity position (see section 6.3.2.3 ("United States")). In particular, CEG has a put option exercisable until December 31, 2010, which allows it to sell certain non-nuclear assets to EDF in the limit of \$2 billion (subject to applicable regulatory approvals).

The agreement entered into with CEG is subject to a certain number of conditions precedent, including in particular the obtaining of the necessary regulatory approvals. The transaction is expected to be completed during the third quarter of 2009. Nevertheless, if these regulatory approvals are not obtained by the anticipated dates or if they are obtained subject to conditions more restrictive for the Group than anticipated, the transaction may not be carried out, or may be carried out on terms that are less favorable to the Group, which could have a significant adverse impact on the Group's prospects and financial situation.

In addition, even if the acquisition is successfully completed, the performance and operational advantages related to the acquisition may prove to be inferior to those anticipated by the Group. The same is true for assets acquired relating to the exercise of the put option by CEG. If significant difficulties arise with regard to the quality and performance of the assets to be acquired, or if the value of such assets is not consistent with the assumptions on the basis of which the transaction was valued by the Group, this may have a significant adverse impact on its profits and financial situation, through impairment costs the Group may have to incur.

#### The various reorganizations rendered necessary by opening up of the market could have operational and financial consequences for EDF.

Opening up of the market has in particular resulted in a transfer of distribution activities to subsidiaries and the reorganization of the joint entities through which EDF and GDF Suez (previously Gaz de France) used to manage sales, billing, customer services and distribution networks.

The various reorganizations could have an impact on the operation of sales and distribution activities and on the relationships with local authorities.

Furthermore, they could generate substantial costs, associated in particular with adapting organizational structures and support functions, in particular, information systems.

#### Risks relating to information systems.

The Group operates multiple and highly complex information systems (such as servers, networks, applications and databases), which are essential for the everyday operations of its commercial and industrial business, and which must adapt to a rapidly changing environment. A problem with one of these systems may have material, negative consequences for the Group. In particular, if the information systems put in place or still to be adapted following the total opening up of the market on July 1, 2007 are lacking in terms of reliability or performance, this may have material, negative consequences for EDF.

Finally, as a general matter, the Group cannot guarantee that the policy of reinforcing information back-up systems will not meet with technical difficulties and/or delays in implementation, which could – in the event of a serious incident – have a material, negative impact on the activity, financial results and financial position of the Group.

#### EDF is controlled by the French State, which is its principal shareholder.

Pursuant to the Law of August 9, 2004, the French State is EDF's principal shareholder and must remain the holder of more than 70% of its share capital. Under French Law, a majority shareholder controls most corporate decisions relating to the company, including those that must be passed by the Shareholders' Meeting (in particular, appointment and dismissal of members of the Board of Directors, distribution of dividends and amendments to the by-laws). In addition, the legal dilution limit for the French State holding may limit EDF's capacity to resort to the capital markets or carry out external growth transactions.

#### Much of the Group's workforce belongs to organizations common to EDF and GDF Suez; the Group therefore depends in part on management mechanisms implemented in these common structures.

A large portion of people employed by the Group belonged to organizations common to EDF and GDF Suez (almost all belonging to ERDF and GrDF's common service, distribution subsidiaries of EDF group and GDF Suez group). Some decisions made in the context of these common organizations may accordingly have an impact on EDF, in particular on costs and on the conditions of management of its resources. Moreover, in consequences, EDF and GDF Suez may have divergent interests and views concerning these common organizations, which may have a negative impact on the Group's labor relations climate, financial results and financial structure.

#### The Group does not own a controlling majority of some of its strategic subsidiaries and holdings, or shares control of these entities with other shareholders.

As described in section 6.3.1.2.2 ("Detail of EDF's holding in EnBW"), the EDF group shares control of EnBW with OEW. This shared control is exercised through a shareholders' agreement. The Group cannot, however, guarantee that it will always be in agreement with OEW on its policy towards EnBW.

This may also be the case with respect to Edison, where the two shareholders, EDF and A2A (formerly AEM Milan) and its partners, have joint control,

## Risk factors

and whose relationships are governed by a shareholders' agreement (see section 6.3.1.3.1.2 "Joint takeover of Edison by EDF and AEM Milan (now A2A)"). In addition, advantages which must result from the joint takeover of Edison by EDF and A2A, in particular as regards the Group's gas strategy, depend, in part, on the possibility to combine successfully and effectively Edison's activities with those of the Group.

Other Group businesses are, or will be in the future, exercised within other entities in which the Group shares control, or in which the Group is a minority shareholder. In these situations, the Group may find itself confronted with an impasse when partners disagree or decisions are made which are contrary

This may limit the Group's ability to implement defined strategies and may have a material adverse impact on its business, financial situation or prospects.

Shareholders in some of the Group's subsidiaries and holdings have put options allowing them to require a buyback of their shares by the Group, which, accordingly, may be forced into re-purchasing these shares at an unfavorable time or under unfavorable conditions.

The structure and conditions of the put options that the shareholders, in particular, of EnBW and EDF Energies Nouvelles, have over the Group are described in section 6.3.1.2 ("Germany – EnBW") and 6.4.1.1.2 ("EDF Energies Nouvelles").

If put options are exercised, the Group may be forced to purchase the underlying securities at prices, set by the terms of the agreements in force, which could exceed their market value. In addition, the financing of these purchases could interfere with other Group acquisition or investment expenses, delay them, or oblige the Group to seek financing under less favorable conditions, which could have a negative financial impact on the Group.

#### The Group may find itself forced to launch a tender offer for the acquisition of listed companies in which it has holdings.

The Group has holdings in a number of listed companies for which current legislation may require, under certain conditions, a shareholder exceeding certain thresholds to launch a tender offer to purchase all of the existing share capital. The Group may, therefore, be forced to launch such an offer under unfavorable conditions, especially with respect to price, which may have a negative impact on its financial situation.

#### Risks due to the international dimension of the Group's activities.

Some Group investments and commitments are exposed to the risks and uncertainties associated with doing business in countries which may have, or have recently had, a period of political or economic instability. Several countries in which the Group operates have less developed regulations providing less protection, maintain or could initiate controls or restrictions on repatriation of profits and capital invested, fix or could fix taxation and fees affecting the Group's activities, and impose or could impose restrictive rules with regards to the business of international groups. In these countries, the electricity sector is also subject to sometimes rapidly changing regulations which could be influenced by political, social or other considerations, which may have an effect on activities or financial results of the Group's subsidiaries and thus not be in its interest. The occurrence of any of these events may have a negative impact on the Group's activities, financial results and financial situation.

Finally, the Group has developed or built a portfolio of "Independent Power Plants" ("IPP") in different parts of the world, especially in Brazil, Vietnam, Laos and China, in which it plays one or more roles (engineering, project management, project manager, investor or operator). In these different capacities, the Group may find itself liable or the Group's financial performance may be affected, especially if the return on capital employed for the IPP is lower than expected, if long-term electricity contracts or "passthrough" clauses are questioned, or in the event of major changes to electricity market rules in the country concerned.

#### The Group must continually adapt its skills in a rapidly changing environment and renew much of its workforce while transferring experience and skills to new employees.

The challenges associated with achieving the Group's strategic objectives in a rapidly changing environment (in particular, the total opening up of markets to competition, international expansion of electricity generation (nuclear or clean coal), growth of the gas business, development of renewable energy sources etc.) require a continuous adaptation of its areas of competence, in particular functional and geographic.

In France, a large number of EDF employees is each year at the retirement age, despite the impact the reform of the special retirement program for gas and electricity industry employees has on the average retirement age. For example, in nuclear generation and network maintenance, approximately 40% to 45% of the workforce could retire during the next ten years. Although this situation may represent an opportunity to adapt the expertise of employees to the Group's new challenges, the renewal of this workforce requires anticipating the knowledge transfer and managing competition to recruit skilled talent.

The EDF group will do its utmost to recruit, retain, redeploy or renew these staff and skills in time and under satisfactory conditions. However, it cannot guarantee the measures adopted will always prove totally adequate, which may have an impact on its business and financial results.

#### EDF group may be required to satisfy significant obligations related to pensions and other employee benefits.

In France, the financing of the pension system for the electricity and gas industries ("IEG") was reformed by French Law of August 9, 2004 (the "Law of August 9, 2004") (see section 17.8 ("Pension system and complementary healthcare benefits system")), which came into force on January 1,

The provisions for the special pension system correspond to specific rights of agents linked to services not covered by the general system.

The evaluation also takes into account the portion of CNIEG management fees for which the company is responsible, the CNIEG carrying out the management and payment of pensions to the inactive population.

Furthermore, the reform of the special retirement systems, including those of IEG, seeking in particular to extend the contribution periods, came into force in July 1, 2008. This reform is backed-up by specific measures (concerning wages, changes in the social welfare system, career planning, etc. – see section 17.8.1 ("Special pension system")). Sectoral agreements were signed in 2008 regarding the social protection system improvement (pension, provident schemes). The negotiations that began in relation with certain matters specific to certain occupations (regarding the appropriate contribution period) will continue throughout the first half of 2009. As of December 31, 2008, the pension provision amounted to €8,796 million.

Outside of France, the main pension obligations relate to EDF Energy, British Energy and EnBW.

In United Kingdom, an official financial review of pension funds is conducted after each three-year period (the "triennial valuation"). The last triennial valuation was performed with respect to the position of EDF Energy and British Energy pension funds as at March 31, 2007 and led both EDF Energy and British Energy to pay, on a yearly basis, additional contributions in order to compensate for the shortage of funds observed at this date (see section 6.3.1.1.2.3 "EDF Energy - Financing and Pensions" and section 6.3.1.1.3.2 ("British Energy activities – Pension")). The next triennial review in connection with EDF Energy and British Energy funds will be performed as at March 31, 2010. Given the sharp deterioration of financial markets in 2008 and early 2009, additional payments to those fixed in 2007 could be decided at the next actuarial review in 2010.

EnBW's commitments are fully provisioned and assets have been specially allocated to face such commitments.

In addition to these pension obligations, there are also commitments related to post-employment benefits (benefits in kind (electricity/gas), retirement gratuity, exceptional additional pension, and bereavement benefits) and long-term benefits for employees currently in service (annuities following industrial accidents and work-related illness, long-service awards, invalidity benefits, etc.) (see note 32.5 to the 2008 Consolidated Financial Statements).

The amounts of these obligations, the provisions and, for EDF Energy and British Energy, the additional contributions to compensate for the shortage of funding for its pension scheme are calculated on an estimated basis using certain hypotheses, in particular, actuarial forecasts and a discount rate, which may be modified in relation to market conditions as well as by regulations governing retirement benefits paid out by the general system and those paid out by the Group. These hypotheses and rules may be adjusted in the future and may increase the provisions under pensions and other employee benefits (and additional contributions by EDF Energy and British Energy). This could have a negative impact on the financial situation or the financial results of the Group.

Furthermore, the Law of August 9, 2004 imposed joint and several liability among the companies in the IEG branch in regards to financing the specific rights for which they are responsible. In the event that one company in the IEG branch fails to pay, EDF may be forced to finance a portion of the obligations of such company. This may also have a negative impact on the financial situation and the financial results of the Group.

#### Employee conflicts could have a negative impact on the Group's activity.

The Group cannot ensure that its employee relationships will not deteriorate or that employee unrest will not occur. Strikes, stoppages, claims or other social problems may harm its business. The Group has not taken out any insurance for losses due to interruptions to business caused by employee demonstrations. As a result, its financial situation and operating results may be adversely affected by employee unrest.

#### The Group has implemented programs to improve its operating and financial performance and to reinforce its financial flexibility. The objectives set for these programs may not be achieved.

The Group has implemented programs to improve its operating and financial performance and to reinforce its financial flexibility. After the achievement of the Altitude program in 2007, the Group implemented a new program, the program Excellence Opérationnelle (see section 12.1 "Performance improvement: "Excellence Opérationnelle" program"). The implementation of such program within the Group was initiated in 2008 on a long-term basis. It aims to improve the Group's results by achieving synergies and continuous progress on its operational processes and supports, its purchasing methods, its conversion and expansion programs.

The Group cannot guarantee that these programs will produce the expected results within the established timeframe. This may have a material adverse impact on the Group's financial results, financial situation and outlook.

#### Risks due to changes to the IFRS standards applicable to the Group.

2008 Consolidated Financial Statements have been prepared, as for the two previous years, in accordance with international accounting standards published by the IASB as approved by the European Union on December 31, 2008 (see note 1.2 to the 2008 Consolidated Financial Statements).

These references are evolving and new standards and interpretations are currently in the process of being drafted and/or approved by the qualified international bodies. The Group is studying the potential impact of standards or interpretations in the process of being approved or authorized by the qualified international bodies on its financial situation. In relation to standards or interpretations in the process of being drafted by the qualified international bodies, the Group cannot predict the possible evolutions that these standards or interpretations could entail, or the impact that they could have on its consolidated financial statements.

## 4.2.5 Risks related to the Capital Structure of EDF and the Listing of its Shares

#### Significant volatility of the market price of shares.

Stock markets have experienced significant fluctuations in recent years, in particular in 2008, which have not always been related to the performance of the specific companies whose shares are traded. Such fluctuations may materially affect EDF share price.

EDF share price may also be materially affected by a number of factors, including factors relating to the EDF group, its competitors, general economic conditions and, in particular, the energy industry.

#### Fluctuation in exchange rates.

The shares are quoted only in euros and any future payments of dividends on the shares will be denominated in euros. The share price and any dividends paid to an EDF shareholder in other currencies could be adversely affected by a depreciation of the euro.

#### Risks related to future sales of shares by the French State.

As of December 31, 2008, the French State was holding 84.66% of EDF's share capital. If the French State decided to reduce further its holding in EDF capital, such sales by the French State, or the perception that such sales could occur, could adversely affect EDF share price.

# **Dependency factors**

In 2008, EDF and ERDF had 19,439 suppliers (compared with 20,289 in 2007 and 22,915 in 2006). EDF and ERDF's five most important suppliers accounted for 11.7% of the total amount committed by EDF<sup>1</sup>, and the 10 most important accounted for 17.3%.

Some suppliers and subcontractors of goods and services purchased by the Group in connection with its business cannot be replaced. The issue of EDF's dependency on its suppliers is principally related to the nuclear power sector and, to a lesser extent, the computing and telecommunications sector.

## Risk factors

The EDF group has developed a skill as the architect-assembler of its generation fleet and as a nuclear fuel cycle integrator, which gives EDF a technical expertise independent of that of its suppliers.

The EDF group has very important commercial relations with the Areva group, which participates in each phase of the nuclear fuel cycle. The Areva group also participates in the construction and equipment sector, together with maintenance of the nuclear fleet.

The Areva group is EDF's main supplier in the nuclear sector. In this respect, EDF considers itself in a situation of interdependence with the Areva group. Relations between EDF and the Areva group, with respect to the fuel cycle, are governed by contracts which are multi-annual. The commercial terms of the contracts may be less favorable when renegotiated than the terms that are currently applicable. With respect to the front-end nuclear fuel cycle (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues – A. Front-end")), EDF still relies to a large but decreasing extent upon the Areva group, which accounted for approximately 68% of EDF's purchases in the front-end cycle in 2008, against approximately 70% in 2007:

- the Areva group supplies an important part of EDF's natural uranium needs. However, EDF is pursuing a policy of diversifying its sources of supply in order to balance market shares between the Areva group and other sup-
- in relation to the nuclear conversion process, a large majority of EDF's needs is met by the Areva group's Comurhex factory, in competition with other worldwide suppliers;
- in the enrichment area, EDF relies predominantly on the Areva group, in particular, through the enrichment services of its Georges Besse I factory. In 2007, EDF and Areva extended their contractual relationship concerning the use of George Besse I until 2010 and contractualised in 2008 the services expected from the new Georges Besse II plant. EDF also buys enrichment services from other suppliers that have already mastered ultracentrifuge technology;
- in relation to enriched uranium reprocessing ("URE"), EDF relies on the Areva group for certain types of services and on foreign suppliers (Tenex and Urenco) for other types, notably enrichment;
- EDF uses two suppliers for the manufacture of fuel assemblies: the Areva and Westinghouse groups.

All operations for management of spent fuel are carried out in the Areva group's factory at La Hague. These operations, as well as the recycling of products coming from the treatment in the form of MOX fuel or fuel with URE are realized according to the EDF – Areva agreement dated December 19, 2008 which follows the previous 2001 agreement. The technical and financial conditions of these operations as well as the amount of discharge for the EDF share of the decommissioning of facilities at La Hague have been specified for the 2008-2012 period.

With respect to the back-end nuclear fuel cycle, see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues – B. Back-end").

#### Power plant development and maintenance

The Areva group is EDF's main supplier with regard to power plant development and maintenance. In particular, the Areva group supplies nuclear boilers, corresponding security studies and their spare parts. A diversification program has been undertaken for several years, in particular, with Westinghouse and Mitsubishi, for the replacement of some major components (steam generators in particular) and provision of maintenance services (for instance chemical cleaning of steam generators).

In order to prepare for the renewal of its generation facilities, EDF has chosen to rely on EPR technology, developed with the Areva group, by launching a first-of-a-kind project. In relation to this first-of-a-kind project, in 2007 EDF signed a contract with Areva for the supply of the EPR boiler at Flamanville 3.

EDF also maintains relations with the Alstom group for the maintenance of certain components of nuclear and fossil-fired power plants. In addition, Alstom is the supplier of the engine room of the EPR boiler at Flamanville 3. Goods and services supplied to EDF by Alstom are particularly important with respect to the maintenance of the nuclear power plants' turbo-generators and of certain large-sized components of the fossil-fired generation facilities. EDF does not consider itself in a situation of dependence on the Alstom group, which is in competition on most of its activities. In particular, this competition led in 2008 to the attribution divided between Alstom and Toshiba of the important market for the renovation of generators of the nuclear power fleet.

Finally, the EDF group does not believe that, overall, it is in a situation of dependence with any given customer.

# Information about the Company

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# 5.1

## **History and Development of the Company**

In this Document de Référence, the references to the articles of association refer to those of the Company as approved by the French Decree n° 2004-1224 of November 17, 2004, and pursuant to French Law n° 2004-803 of August 9, 2004 relating to the public electricity and gas service and to electricity and gas companies (the "Law of August 9, 2004"), and as modified by the ordinary et extraordinary Shareholders' meeting of February 14, 2006.

## 5.1.1 Name and registered head office

The name of the Company is: "Electricité de France". The Company may also be legally named solely by the "EDF" acronym.

The Company's head office is located in Paris (8th arrondissement): 22-30, avenue de Wagram.

## 5.1.2 Commercial registry, APE code

The Company is registered with the French Registre du Commerce et des Sociétés de Paris (Commercial and Corporate Registry of Paris) under the number 552 081 317.

Its APE code is 401 E.

## **5.1.3** Date of incorporation and duration of the Company

Pursuant to French Law n° 46-628 of April 8, 1946, EDF was created in the form of a Public Industrial and Commercial Establishment (Etablissement Public industriel et commercial, or "EPIC").

EDF was transformed into a French société anonyme by the Law of August 9, 2004 and the French Decree of November 17, 2004. The duration of the Company is set at 99 years starting from November 20, 2004, except in the case of early dissolution or of extension.

## 5.1.4 Legal form and applicable legislation

Since November 20, 2004, EDF has been a French société anonyme with a Board of Directors governed by the laws and regulations applicable to commercial companies, in particular the French Commercial Code, insofar as these are not derogated from more specific laws, such as French Law

n° 46-628 of April 8, 1946, French Law n° 83-675 of July 26, 1983, French Law n° 2000-108 of February 10, 2000, the Law of August 9, 2004, the Law of December 7, 2006 relating to the energy sector and by its articles of association.

## **5.1.5** History

The following elements describe the major stages of the Group's development.

EDF was created in 1946. Before 1946, the electricity sector had developed around numerous local companies across France. At the end of the 1930s, there were approximately 200 generation companies, with approximately 100 transmission companies and 1,150 distribution companies. This multitude of private companies, in addition to some 250 local utilities, was responsible for approximately 20,000 distribution concessions. A certain number of large groups emerged from this apparent fragmentation in the fields of generation and distribution.

In 1946, the electricity and gas sectors were nationalized. The French Law of April 8, 1946 created EDF in the form of an EPIC and created a special status for the personnel of the Power and Gas Industries (Industries Electriques et Gazières, or "IEGs"). The law nevertheless left in existence a certain number of non-nationalized distributors (local distribution companies, "LDCs").

The industrial base was developed over the period from 1946 to 2000. Initially, there was a fleet of fossil-fired generation facilities using coal then oil, and hydropower facilities, in particular with the construction of the dams of Tignes in 1952 and Serre-Ponçon in 1960. In 1963, following the French State's decision to guarantee France's independence in the energy field through nuclear power, EDF put into service the first commercial-scale nuclear generation unit at Chinon (70 MW), the first of a series of 6 generation units of the Uranium Natural Graphite Gas ("UNGG") family, the construction of which was staggered until 1972. The oil shocks of 1973 and 1979 resulted in an acceleration of the replacement of fossil-fired power with nuclear power. In 1969, the UNGG was abandoned in favor of the Pressurized Water Reactor ("PWR") family, which was used for new power plants: 34 generation units of 900 MW with construction staggered until 1988, then 20 generation units of 1,300 MW with construction staggered until 1994, then with 4 N4 generation units of 1,450 MW entering into service in 2000 and 2002.

Beginning in the 1990s, EDF embarked on a significant expansion abroad. In 1992, the Group obtained an interest in the share capital of Edenor, a distribution and supply company in Argentina. This shareholding was later

increased to 90%. In May 1996, EDF acquired 11.34% of the share capital of the Brazilian electricity company Light, a distribution and supply company located in the State of Rio de Janeiro. As of December 31, 2004, EDF held 94.8% of the share capital of this company. In December 1998, EDF acquired 100% of London Electricity (renamed EDF Energy on June 30, 2003). This policy was pursued in 2001 with the acquisition of 34.5% of EnBW and the acquisition of shareholding interests in the Italian company Edison by the IEB consortium (63.8%), of which EDF held 18.03%, and in 2002 when London Electricity acquired 100% of the share capital of EPN Distribution plc and of Seeboard plc, two distribution companies located in the east and the south-east of England.

In France, the major development of recent years has been the opening of the market under the impetus of European regulation. In February 1999, sites where electricity consumption exceeded 100 GWh per year, some 20% of the market, became entitled to choose their supplier. The eligibility threshold was then progressively lowered. In May 2000, 30% of the market was thus opened to competition, then 37% in February 2003. In July 2004, the totality of the market for non-household customers, equivalent to 69% of the entire market, was opened. Since July 2007, the market has been fully open to competition and includes residential customers.

In parallel, the structures necessary for effectively operating a competitive market were put into place. The French Electricity Regulation Commission (which became the French Energy Regulation Commission — Commission de Régulation de l'Energie, or "CRE") was created in May 2000. In the same year, in order to guarantee non-discriminatory access to all operators in the market, EDF created the Electricity Transmission Network (Réseau de Transport d'Electricité, or "RTE", which became a wholly-owned subsidiary of EDF in 2005 as "RTE-EDF Transport"), an independent internal entity responsible for managing the high voltage and very high voltage public electricity transmission network. In 2000, the Group formed the trading company, EDF Trading, with the trading specialist Louis Dreyfus. It became a wholly-owned subsidiary in 2003. In 2001, Euronext and various industrial and financial operators on the electricity market, including EDF, created Powernext, the French electricity exchange. In 2001, in exchange for authorisation to take an interest in EnBW obtained by EDF, the European Commission requested EDF to implement a system of power supply capacity auctions (Virtual Power Plants, or "VPP") to facilitate access to the market for competitors. In 2003, the EDF group sold its shareholding in the Compagnie Nationale du Rhône to Suez (now GDF Suez).

On November 20, 2004, in accordance with the French Law of August 9, 2004, EDF was transformed into a French société anonyme with a Board of Directors.

On May 12, 2005, EDF and A2A S.A. (formely AEM S.p.A) entered into agreements relating to their decision to take joint-control of Edison. Following the launch of a takeover bid on October 4, 2005, this joint takeover was completed on October 26, 2005, when the offer was closed.

Since 2005 the EDF group implemented its strategy of refocusing on Europe by selling its controlling interest in its subsidiaries Edenor and Light and its assets in Mexico.

Finally, EDF was listed on the stock exchange during the second half of 2005. This operation was made possible by the company issuing 196,371,090 new shares and by the French State selling more than 34.5 million shares to employees and former employees of EDF and of certain subsidiaries. This was followed by the sale of 45 million shares owned by the State on December 3, 2007.

By the end of November 2006, EDF Energies Nouvelles, a subsidiary of which the EDF group held 50%, became listed on the stock market. This operation involved the issuance of 18,946,854 new EDF Energies Nouvelles shares, 4,798,464 of which were reserved to the EDF group.

Since January 1, 2008, EDF's distribution business has been carried out by Electricité Réseau Distribution France (ERDF), a subsidiary wholly owned by EDF, as a result of the contribution of the distribution activities in compliance with the French energy sector Law of December 7, 2006.

In 2008, the EDF group became a major player in the revival of nuclear power abroad by creating a joint venture with the Chinese electricity provider CGNPC, by concluding an agreement with a view to acquiring British Energy in the United Kingdom through a public offer (acquisition which was completed on January 5, 2009), and by entering into an agreement, which should be finalised during the third quarter of 2009, for the acquisition of almost half of the nuclear assets of Constellation Energy in the United States.

#### **5.2 Investments**

For a description of the main investments made by the Company for the period 2006-2007, see section 9.9.1.2 ("Net accounting flows related to investment activities") of this Document de Référence. As regards the Group's investment policy in the future, see section 6.1.6 ("Investment Policy") below.

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The EDF group is an integrated energy company with a presence in a wide range of electricity-related businesses: generation, transmission, distribution, supply and energy trading. It is France's leading electricity operator and has a strong position in the three other main European markets (Germany, the United Kingdom and Italy), making it one of Europe's leading electrical players as well as a recognized player in the gas industry. With worldwide installed power capacity totaling 127.1 GW (124.8 GW in Europe) and global energy generation of 609.9 TWh, it has the largest generating capacity of all the major European energy corporations with the lowest level of CO<sub>2</sub> emissions due to the significant proportion of nuclear and hydroelectric power in its generation mix. The EDF group supplies gas, electricity, and associated services to more than 38 million customers accounts<sup>1</sup> worldwide (including approximately 28 million in France).

The EDF group's businesses reflect its adoption of a model aimed at finding the best balance between French and international activities, and between competitive and regulated operations. In 2008, the Group's consolidated revenues were €64.3 billion, the net income (Group share) was €3.4 billion, and earnings before interest, tax, depreciation and amortization was €14.2 billion.

Since July 1, 2007, the EDF group conducts its business in a European market that is completely open to competition. Since January 1, 2008, ERDF, a wholly owned subsidiary of EDF, has assumed responsibility for all distribution in France, while RTE-EDF Transport is responsible for all transmission activities.

## **Strategy**

The world is facing a major energy challenge, namely to meet growing demand against a backdrop of shrinking resources and climatic constraints. Added to this since autumn 2008 is a global financial and economic crisis, the consequences of which for economic activity remain uncertain.

However, as stated by the International Energy Agency in its most recent publication, published at the end of 2008 ("World Energy Outlook 2008"), questions relating to energy and climate change remain urgent and necessary investments should not be questioned as major difficulties will still arise, particularly risks related to supply shortages and price bursts, as well as a rise in CO<sub>2</sub> emissions leading to large-scale climate change.

This global context and the priorities defined at a European level concerning energy security and reducing emissions of greenhouse gases require efforts both upstream ("decarbonate" production via procedures emitting little or no CO<sub>2</sub>) and downstream (control of energy demand via more efficient use, shared development of decentralized renewable sources). Nuclear

power, which can combine competitiveness with self-sufficiency and low CO<sub>2</sub> emissions, is now proving to be an essential element of the future energy mix, both in France and in many other parts of the world.

As the world's leading generator of nuclear power, with a unique position in Europe, and a strong presence on the four main markets, EDF believes itself to be ideally positioned to benefit from this situation.

The Group's goal is to position itself as an energy leader by prioritizing investment with a view to lasting industrial growth. The Group's investments are focused on the following three areas:

- reinforcement of its European leadership and long-term competitive advantages;
- promotion of energy efficiency, renewable sources, and environmentally efficient technologies;
- achievement of a leading role in the global revival of nuclear energy.

### 6.1.1 Reinforce its European leadership and long-term competitive advantages

### **6.1.1.1** IN FRANCE

EDF intends to:

- provide new product offerings to its customers, including gas and services, focusing on eco-efficient energy (see section 6.2.1.2.4 "Eco-efficient energy solutions"); and
- continue its efforts to optimize its electricity generation mix, improve the performance and increase the useful life of its generation plants.

EDF is continuing the work it began in 2005 on the improvement of its electricity generation mix by strengthening its peak and mid-merit capacity, which includes putting back into service 4 fuel oil units following their modernization, the construction of combustion turbines, 3 of which have been completed, and 3 of which are under construction, and the construction of 3 gas-fired combined cycle power stations.

EDF is also carrying out significant maintenance programmes for its fleet, particularly the hydraulic and nuclear components.

EDF also intends to maintain the quality of its hydroelectric generating capacity and pursue new projects. Thus it expects to spend approximately €560 million on its hydroelectric plant maintenance and technical upgrading program, "Hydropower Safety and Performance," between 2007 and 2011. The competitive procurement of hydropower concessions that will expire represents an important challenge for which EDF is prepared (see section 6.2.1.1.4.4 "Current and future hydropower generation issues").

EDF has launched an enhanced maintenance program for nuclear plants in order to improve its short-term performance, particularly with respect to availability of its plants (with a target of 85% by the year 2011) and to position itself to be able to extend the life of its facilities following the example of other nuclear operators worldwide. These programmes, as well as the sustained research and development efforts and a continuous dialogue with the French Nuclear Safety Authority, particularly with regard to the preparation of the third decennial visits scheduled for the first two units in 2009, contribute to prolonging the operating life of the nuclear generation units and the aim of significantly extending their average useful life beyond forty years.

• prepare to renew nuclear facilities and retain EDF's technological edge.

As regards baseload plant, EDF is preparing to renew its nuclear facilities by the construction of an EPR at Flamanville (1,600 MW, scheduled to start in 2012) followed by the construction of a second EPR in France at Penly.

• promote a policy of sustained investment in electricity networks.

In its regulated business, the Group aims to retain its reputation as an exemplary and transparent operator. It intends to strengthen its Distribution business, and continually pursue customer satisfaction throughout its entire client base by the excellence of its service and its professionalism. It is therefore striving to pursue a policy of sustained investment in its networks by promoting innovative technology that generates electricity efficiency, in the context of strong growth of demand due to the rapid expansion of decentralized production.

In the transmission business, in addition to its commitment to extend the

Very High Tension network in France, the EDF group is enthusiastically committed to interconnections to facilitate cross-border exchanges. The Group is therefore encouraging the increased cooperation among transmission system operators (TSO) so as to accelerate the integration of regional and futures markets in Europe.

The future Tarif d'Utilisation des Réseaux Publics d'Electricité (TURPE3) would aim to ensure the necessary economic coherence between network operators' contemplated investments and their financing needs.

#### **6.1.1.2** IN EUROPE

Over and above its investment program in France, the EDF group plans to consolidate its leadership based on its current positions by strengthening its portfolio of electricity generating assets in Europe, fostering the growth of its subsidiaries, and pursuing integration within the Group.

- United Kingdom: the recent acquisition of the "British Energy" group (see section 6.3.1.1.3 "British Energy") should enable EDF to play a leading role in the revival of nuclear power and reinforce the balance between EDF Energy's upstream and downstream operations. In addition, a joint subsidiary between EDF Energies Nouvelles and EDF Energy, EDF Energy Renewables, was created in order to develop renewable energy sources in the United Kingdom;
- Germany: EDF is supporting the growth of EnBW in this country (projects for the reinforcement of hydropower capacities on the Rhine, supercritical coal-powered power plants, etc.) and abroad, particularly in Central and Eastern Europe and Turkey, and in its various projects (wind energyoffshore, gas sector, hydroelectric, etc.). The acquisition of 26% of EWE (group of services to local authorities, with presences in Poland and Turkey) by EnBW, concluded in July 2008 for approximately €2 billion, strengthens this strategy. This acquisition remains, at the date of the filing of the present Document de Référence, subject to the approval of the German competition authorities;
- Italy: the EDF group is supporting the reinforcement of Edison's business model that is based chiefly on safeguarding gas supplies, improving upstream/downstream equilibrium by acquiring market share downstream, as well as its international expansion, especially in Greece and the Balkans. The Italian government's policy decision to reinvest in nuclear power represents a major event. The Group proposes to contribute to this revival along with the other key actors involved (see section 6.1.3 "Be a main actor of the revival of nuclear power worldwide");
- Benelux: the Group aims to create a strong integrated position in Benelux, a neighboring market at the heart of Europe. EDF and Delta, equal partners in the construction of a 870 MW gas-fired combined cycle power plant in the Netherlands, which should be put into service in 2009, will each own 50% of the electricity generated in this zone;
- Switzerland: following negotiations between Atel Holding (in which the Group has a holding) and EOS Holding, Atel and EOS combined their activities on January 27, 2009 in order to become the leading Swiss energy company active on a European scale under the name Alpiq. Atel, EOS, the Swiss minority shareholders of Atel and EDF signed the agreements relating to this transaction on December 18, 2008. Alpiq Holding SA in which EDF holds, at the date of the filing of this Document de Référence, a shareholding of approximately 25%, commenced its activities on February 1, 2009.
- Central and eastern Europe: these countries, including Russia, have significant development potential for the Group.

#### 6.1.1.3 GAS

The Group is continuing to secure the gas resources it needs for its combined-cycle gas generators (CCGs) and increased sales to end users, principally through dual-fuel offers: the Group's medium-term aggregate requirements are estimated at around 45 Gm<sup>3</sup>.

In the area comprising France, the United Kingdom, Germany and Italy, the Group's target is to have an average market share of close to 15% in terms of gas volume sales to end users. The Group therefore wants to increase its portfolio of gas purchase agreements, and its presence in gas reserves as well as to logistical infrastructure, either by investing or by reserving contractual rights. This strategy is implemented notably through projects and operations managed by Edison in southeastern Europe – such as the IGI gas pipeline infrastructure project, linking Italy and Greece, or the acquisition of exploration/production holdings in the Egyptian Abu Qir oilfield – and acquisitions of holdings in northwestern Europe – such as the acquisition in October 2008 of a majority stake in exploration/production in British North Sea gas fields from ATP Oil & Gas Corporation.

#### 6.1.1.4 PROGRAMME FOR IMPROVEMENT OF OPERATIONAL **PERFORMANCE**

Finally, the improvement of the operational performance via the success of the transverse program "Excellence Opérationnelle" is a priority for the whole Group. Following the completion of the "Altitude" performance program (2005-2007), the objectives of which were greatly exceeded at the end of 2007, the Group embarked in 2008 on a new three-year program. It aims to continuously and perpetually improve the Group's performance in all areas: operational and support processes, purchase methods, transformation and development projects, realization of synergies, and innovation. The Group's target for 2008-2010 is to reach a gain of €1 billion on the Group's 2010 EBITDA compared to that of 2007. €285 million of gain were already realized in 2008 (see section 12.1 "Performance improvement: the "Excellence Operationnelle" program").

### **6.1.2** Promote energy efficiency, renewable sources, and environmentally efficient technologies

The European climate policy and the "Grenelle de l'Environnement" in France, with its "50 measures for renewable energy" have created a very ambitious framework for the Group in this domain.

EDF is particularly active with regard to:

- services focused on downstream energy efficiency: the EDF Group's target is to be the leader in services linked to eco-energy efficiency. In France, EDF aims to increase each year the number of customers subscribing to energy management and decentralized renewable sources offers, and produce energy saving certificates by its actions with clients. The Group is offering solutions to the European markets for managing energy consumption and developing innovative energy solutions. It is also developing product offerings based on energy management and encourages the development of multi-source energy as an integral part of buildings (photovoltaics, heat pumps, etc.) via EDF Energies Nouvelles Réparties. Moreover, it aims to promote the future development and commercialisation of electric vehicles and rechargeable hybrids (agreements to this end were concluded with Toyota in 2007, and with Renault-Nissan and PSA Peugeot-Citroën in 2008);
- The development of centralized production of renewable energy: this is a major focus of growth for the EDF group, and contributes to a low

CO<sub>2</sub>-emitting energy mix, complementing nuclear power. The Group intends to continue this development via its subsidiary EDF Energies Nouvelles, which at the end of 2008 carried out a €500 million capital increase. EDF Energies Nouvelles intends, either alone or in partnership, to increase its installed capacities in renewable energy in order to reach (excluding hydropower) 3,000 MW in 2011 and 4,000 MW in 2012, principally in wind energy, but also including 500 MWc of solar energy by 2012. In October 2008, EDF decided to install a series of wind farms in Brittany by 2011. Offshore wind power developments are also under consideration, principally in Germany and the United Kingdom. In France, in the context of the "Grenelle de l'Environnement", the new tariffs decided by the government for photovoltaic facilities installed on professional buildings, with unlimited power, as well as the launch announced by the government of invitations to bid for the construction of solar power plants (one per region), should contribute to an increased development of photovoltaic energy;

• Coal technologies: the EDF group also aims to make the most of opportunities that arise, in Europe and worldwide, from the newest technology (supercritical coal-fired power plants) and to contribute to perfecting capture, transport and storage technologies ("CCS: CO<sub>2</sub> Carbon Capture & Sequestration").

### 6.1.3 Be a major player in the global revival of nuclear energy

As the world leader in nuclear power, the Group possesses some significant strengths (operator of the world's largest nuclear capacity, engineering expertise) in its objective of international growth in an environment which is currently becoming more favorable to this technology. With respect to strategic partnerships, the EDF Group's target is to invest in a total of 10 EPR by 2020, including 2 in France, and then to participate in their construction and commencement of service and operation. The priority target countries are:

- United Kingdom: EDF's amibition is to develop 4 EPRs by 2020 in the United Kingdom. The success in January 2009 of the friendly takeover bid for British Energy, the leading British electricity producer, represents a very important step in the Group's development in the United Kingdom and reinforces its position in the revival of nuclear power. EDF has thus made significant progress in the implementation of its development strategy. This acquisition, the largest in the Group's history, should enable it to play a leading role in the global nuclear revival, and consolidate its own position in Europe and that of EDF Energy in the United Kingdom;
- United States of America: in July 2007, EDF and Constellation Energy signed a strategic partnership agreement ("UniStar Nuclear Energy 50/50 joint venture") to jointly design, build, own, and operate in the United States EPR-type nuclear power plants. The objective is to develop 4 EPRs, including 2 before 2020. They have also entered into a cooperation agreement to consider the "study" of common investment opportunities in the United States and Canada, and particularly in electricity generation. In response to the takeover bid for Constellation in September 2008 by MidAmerican Energy Holding Company, EDF presented an offer which was accepted by Constellation's Board of Directors on December 17, 2008. At the close of the transaction, the EDF group will acquire 49.99% of Constellation Energy's nuclear generation and operation activities for approximately \$4.5 billion. An option to sell Constellation Energy's non-nuclear generation assets to the EDF group for an amount of up to \$2 billion was also granted to Constellation Energy. Subject to a certain number of suspensive conditions including the obtention of regulatory authorizations, the transaction is intended to be definitively concluded during the third quarter of 2009;
- China: in November 2007, EDF and the China Guangdong Nuclear Power Corp. (CGNPC) signed an agreement granting EDF the right to invest and operate in China via a holding of approximately 30% in the Taishan

Nuclear Power Joint Venture Company (TPNC), the purpose of which is to build, own, and operate two units of EPR technology. On August 10, 2008, the final agreements concerning the creation of this company were signed in Beijing. The two nuclear power plants should be put into service in 2013 and 2015 in Taishan, which is located in the province of Guang-

- Italy: at the end of 2008, the Italian government announced its intention to launch a nuclear programme with the objective of commencing construction of first plants in 2013. On February 24, 2009, France and Italy signed a nuclear cooperation agreement covering the whole of the nuclear industry that opens the Italian market to the French nuclear operators and also provides for the involvement of Italian groups in the development of civil nuclear power in France, and encourages Franco-Italian cooperation for the export of nuclear technology to third-party countries. In this context, EDF and Enel signed two agreements: the first agreement sets up a 50/50 consortium between EDF and Enel to look into the feasibility of developing at least four nuclear reactors based on EPR technology in Italy; the second agreement plans to extend Enel's participation in the French new nuclear program and to join forces with the Italian group in the construction and operation of the new EPR reactor at Penly. Enel already has a 12.5% interest in the EPR under construction at Flamanville and will take a similar holding, alongside other partners, in the second French EPR to be built by EDF to start by 2017.
- The Republic of South Africa: due notably to the global financial crisis, the South African public electricity provider Eskom decided to defer, in 2008, its project for the construction of two nuclear reactors.

Moreover, in January 2008, the Group signed a protocol of agreement with Qatar whereby EDF would support Qatar's plans to develop nuclear power for civilian purposes. Other possibilities may emerge over the short and

In addition, in order to secure the volume and price of its uranium supplies, the Group is considering creating an upstream presence in the nuclear industry.

### **6.1.4** Investment policy

#### **6.1.4.1** INVESTMENTS IN 2008

In 2008, the EDF group's investments totaled €14.4 billion compared with €8.5 billion in 2007 and €6.6 billion in 2006.

The EDF group continued to increase its operational investments: in 2008 these investments reached €9.7 billion, an increase of €2.2 billion compared with 2007 (or +29.5%), after an increase of 26% between 2006 and 2007 (see section 9.9.1.2 "Net cash flow used in investing activities"). In France, (the segment "France" does not include the French subsidiaries of the Group, including EDF Energies Nouvelles and Dalkia, see section 9.6 ("Segment reporting of financial information")), investments in generation and networks in 2008 totaled €5.2 billion in 2008 (€4.5 billion in 2007, an increase of 14%). Investments in generation were more than 26% higher in 2008 than in 2007. Operational investments related to the nuclear fleet totaled nearly €2 billion of which approximately €0.8 billion for the construction of the EPR at Flamanville. International operational investments in 2008 totaled €4.5 billion.

Furthermore, in 2008, EDF invested approximately €4.7 billion in external growth. The year 2008 was marked by two major external growth operations, namely (i) the acquisition of British Energy in the United Kingdom for £12 billion (excluding shares still in circulation and costs related to the acquisition) equivalent to €13.2 billion euros, the first phase of which resulted in an investment in 2008 of €2.7 billion, and (ii) the agreement for acquisition of nearly 50% of nuclear assets of Constellation Energy in the United States for \$4.5 billion, which led to an outflow of almost €0.9 billion in 2008, the closing of which should occur during the third quarter of 2009. Investments relating to external growth in 2008, other than those relating to British Energy and Constellation Energy, reached €1.1 billion and were in line with those of 2007 (nearly €1 billion).

#### 6.1.4.2 INVESTMENT POLICY IN 2009

The EDF group aims to strengthen its operational investment program in 2009, particularly in France, and to continue the revival of investments related to energy and environmental long term issues. In France, the Group is expecting to invest approximately €7.5 billion in 2009 (see section 9.6 ("Segment reporting of financial information")). Operational investments growth, in France, reflects an increased effort in the maintenance of generation facilities, networks (transmission and distribution) and infrastructure in Corsica and the overseas departments. Through this program of operational investments in France and the development of renewable energies in France (especially solar energy) and the French supply of equipment for international nuclear energy development, the Group will participate in the governmental plan for the economy up to €2.5 billion.

In addition, at the beginning of 2009, the EDF group disbursed the outstanding balance for the acquisition of British Energy and is also expected to pay the outstanding balance for the purchase of nearly 50% of nuclear assets of Constellation Energy in the United States after the completion of this operation.

#### 6.1.4.3 INVESTMENT POLICY IN THE NEW NUCLEAR PROGRAM BY 2020

The international ambitions of the Group in the new nuclear program until 2020 cover 4 reactors in the United Kingdom, 2 in the United States and 2 in China. In France, EDF is investing in a first EPR at Flamanville the construction of which is in progress.

The total amount of investments is estimated, at the end of 2008, at between €40 billion and €50 billion (2008 euros) by 2020. The net financing requirements to be borne by the Group for the same period should be between €12 billion and €20 billion (2008 euros), especially given the involvement of partners in these projects in all of these countries.

The EDF group has sources of financing for these investments:

- financing from partners in a total amount of €8 billion to €10 billion. Partnerships in the form of joint ventures or cooperation agreements were concluded with Enel in France, CGNPC in China and Constellation Energy in the United States. The Group has not excluded the possibility of entering into other partnerships later on;
- financing from "project debt" without recourse to the Group, or limited recourse for €12 billion to €15 billion;
- self-financing using available cash flows generated by the first power plants put into service.

The completion of the new nuclear program over a long period allows smoothing over time of net funding requirements:

- from 2009 to 2011, annual needs are around €1 billion (2008 euros);
- from 2012 to 2019, annual needs are around €1.5 billion (2008 euros);
- from 2019, the entire program of new nuclear energy will generate a positive net cash flow.

These figures do not include the project of development of a second EPR

in France at Penly, nor the project of development of new nuclear power in Italy; these projects are still at a preliminary stage as at the date of the filing of this Document de Référence.

# 6.2

## Presentation of the EDF group's activity in France

### 6.2.1 Deregulated activities in France

The deregulated activities of EDF in France (activities open to competition), include the generation and supply of electricity. EDF is implementing an integrated model for the joint operational management of its portfolio of assets upstream (generation and procurement of energy and fuels) and downstream (wholesale and retail) to guarantee supply to its customers through the best possible management of operational and market risks and with a view to maximizing gross margin.

#### 6.2.1.1 ELECTRICITY GENERATION

EDF groups together its main electricity generation activities in France within its Generation and Engineering Division which has all of the skills and performance levers necessary to operate the largest European electricity generation fleet and to manage its development and continuity.

As of December 31, 2008, the Generation and Engineering Division had 36,109 employees. It is organized around three major areas: nuclear power, hydropower and fossil-fired power.

In addition, its engineering department provides technical and industrial skills to the entire Group in all three areas: nuclear power, hydropower, and fossil-fired power (see section 6.3 "Presentation of the EDF group's international activity" below).

#### 6.2.1.1.1 GENERAL PRESENTATION OF EDF'S GENERATION FLEET

#### 6.2.1.1.1 COMPOSITION AND CHARACTERISTICS OF THE INSTALLED CAPACITY

With a total installed capacity of 96.6 GW in mainland France<sup>1</sup> as of December 31, 2008, EDF has the largest generation fleet in Europe, accounting for approximately 15% of the total installed capacity of the main countries of continental Europe (the 24 countries having members of the

UCTE – Union for the Coordination of Transmission of Electricity – which includes, in particular, Germany, Italy and Spain). In 2008, EDF's generation facilities represented 478.3 TWh.

As of December 31, 2008, the capacity of EDF's generation fleet in metropolitan France was as follows:

- 58 nuclear units based on pressurized water reactors ("PWR") (a unit is defined as a generation unit including a reactor, steam generators, a turbine, a generator and the related equipment): these units are spread out over 19 sites; 34 units have a power capacity of 900 MW each, 20 units have a power capacity of 1,300 MW each, and 4 units have a power capacity of nearly 1,500 MW each; the average age of the units is 23 years<sup>2</sup> (between 7 and 31 years);
- 36 functioning fossil-fired units, with those in service having an average age of approximately 30 years; in addition, 4 units under guaranteed multiyear shutdown;
- 447 hydropower plants with an average age of about 50 years;

There were also:

- the wind power generation capacity of EDF Energies Nouvelles in France (see section 6.4.1.1.2 ("EDF Energies Nouvelles") below) and the incineration plants of the TIRU Group (see section 6.4.1.1.3 ("Other holdings in the renewable energy sector") below); and
- 69 hydropower plants attached to the operational perimeter of the Generation/Engineering Division but held by the Group's subsidiaries: SHEMA (100%), FHYM (69.7% since January 8, 2008), representing a total of 73 MW of installed capacity in 2008 and 238 GWh generation capability.

6.2.1.1.1.2 EVOLUTION OF THE INSTALLED CAPACITY AND GENERATION OVER THE LAST THREE YEARS

	As of December	As of December 31, 2006		As of December 31, 2007		As of December 31, 2008	
Installed Capacity <sup>(1)</sup>	In MW	%	In MW	%	In MW	%	
Nuclear power	63,130	65	63,130	65	63,130	65	
Hydropower <sup>(2)</sup>	20,062	21	20,069	21	20,066	21	
Fossil-fired <sup>(3)</sup>	13,206	14	13,032	14	13,407	14	
TOTAL	96,398	100	96,231	100	96,615(4)	100	

- (1) Expressed in MW of power connected to the network.
- (2) Excluding Corsica and the French overseas departments, 370 MW in 2008.
- (3) Excluding Corsica and the French overseas departments, 1,406 MW in 2008.
- (4) This value also includes 12 MW of capacity of wind generation.

The table below shows the evolution of the generation from EDF's installed capacity over the last three years:

	As of December 31, 2006		As of December 31 2007		As of December 31 2008	
Generation	In TWh	%	In TWh	%	In TWh	%
Nuclear power	428.1	88	418.0	88	417.6	87.3
Hydropower <sup>(1)(3)</sup>	40.2	8	41.2	8	44.8	9.4
Fossil-fired <sup>(2)</sup>	16.9	4	18.2	4	15.8	3.3
TOTAL	485.2	100	477.5(4)	100	478.3 <sup>(4)</sup>	100

- (1) Excluding Corsica and the French overseas departments, 1.6 TWh in 2008.
- (2) Excluding Corsica and the French overseas departments, 4 TWh in 2008.
- (3) Total hydraulic generation: the electricity consumption needed for the operation of pumped storage plants amounted to 6.5 TWh in 2008, resulting to a net hydraulic generation (given the pumped storage consumption) of 38.3 TWh.
- (4) These values correspond to the sum of the precise values, corrected to one decimal place.

#### 6.2.1.1.2 STRENGTHS OF THE GENERATION FACILITIES' FLEET

With a total installed capacity of 96.6 GW as of December 31, 2008 in mainland France, EDF has the largest fleet of generation facilities in Europe. This fleet has significant assets:

- a competitive generation mix with low variable generation costs and limited exposure to hydrocarbon market fluctuations due to nuclear and hydropower facilities;
- · a variety of generation means enabling adequate coverage of EDF's downstream portfolio needs (end users, VPP, sales to alternative suppliers, sales on the wholesale markets, etc.). Utilization of the fleet's various components is managed by giving priority, at any given time, to the generation type offering the lowest variable costs. Run-of-river hydropower plants are used for base generation. Nuclear plants, because of their low variable generation costs, are used for baseload and mid-merit generation. Adjustable hydropower generation (coming from dams) and fossil-fired plants are used for mid-merit and peak generation;
- a significant standardized fleet of nuclear facilities; EDF's full control over their entire life cycle gives the company competitive advantages. Moreover, EDF is working towards extending the operating life of its power plants and improving their technical performances;
- a fleet generating at over 95% without CO2 emissions owing to the predominance of nuclear and hydropower generation facilities, representing a competitive advantage in an increasingly restrictive regulatory context; and
- · a geographical position at the junction of electricity exchanges between the continental platform and the electric peninsulas (Italy, Spain, the United Kingdom).

### **6.2.1.1.3** NUCLEAR GENERATION

The electricity generated by EDF from its fleet of nuclear power plants represents, as of December 31, 2008, 87.3% of its total electricity generation. The characteristics of this fleet are set forth below.

#### 6.2.1.1.3.1 EDF'S NUCLEAR FLEET

EDF's PWR model is divided into three series of available electrical power:

- 900 MW series consisting of 34 units of approximately 900 MW (i.e., a total power capacity of 30,770 MW);
- 1,300 MW series consisting of 20 units of approximately 1,300 MW (i.e., a total power capacity of 26,370 MW); and
- N4 series, the newest, consisting of four units of approximately 1,500 MW (i.e., a total power capacity of 5,990 MW);

totaling 58 units in service spread over 19 sites, with a total installed capacity of 63,130 MW as of December 31, 2008.

The first unit of the 900 MW series power plant was commissioned at Fessenheim in 1978. The most recent unit was commissioned at Civaux in 2002. This fleet of reactors has accumulated an experience equivalent to more than 1,300 reactor-years of operation (arithmetic sum of the years of operation of EDF's PWRs). EDF's nuclear fleet is one of the youngest in the world, with an average age of approximately 23 years for an estimated technical operating life in excess of 40 years.

The distribution of units by age is as follows:

- 4 units have been in service for less than 10 years;
- 1 unit has been in service for between 10 and 15 years;

• 19 units have been in service for between 25 to 30 years.

- 11 units have been in service for between 15 and 20 years;
- 23 units have been in service for between 20 and 25 years; and

EDF owns nuclear facilities' sites, which is an advantage when it comes to the renewal of its fleet, because EDF already has the sites needed to build

The EDF power plants of the first-generation technology have been gradually shutdown and are being decommissioned.

#### **Generation allocation contracts**

EDF has developed an industrial cooperation with European operators in the nuclear industry, in the form of generation allocation contracts related to units of EDF's French nuclear fleet. Thus, EDF's fleet includes five jointly-owned power plants (currently up to 1.4 GW, evolving to 1.6 GW with the start-up of Flamanville 3) with the following European electricity companies:

- Fessenheim 1-2: EnBW (17.5%) and the consortium of Swiss electricity companies, CNP (15%);
- Bugey 2-3: Electricité de Laufenbourg in Switzerland (17.5%);
- Tricastin 1 to 4: Electrabel (12.5%);
- Cattenom 1-2: EnBW (5%);
- Flamanville 3 under construction: Enel (12.5%) (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet") for the industrial partnership agreement signed with Enel on November 30, 2007).

The purpose of these generation allocation contracts, for each unit concerned, is to make available to each partner the proportion of energy generated which is actually due to them - in return for payment of their share of the construction costs, annual operating costs (including the upstream and downstream fuel costs), local taxes and taxes specific to

nuclear energy, and the costs relating to decommissioning. In these operations, the partners shared the industrial risks with EDF during the development of the power plants (involving three firsts-of-a-kind) and assume the risks associated with the operation of the power plants. They have, however, no operational role.

Furthermore, EDF signed a second type of generation allocation contract (for a total of 2 GW) enabling its partners to benefit from a proportion of electricity generation from a given fleet. These contracts mainly concern the following power plants:

- Chooz B1-B2 (first-of-a-kind N4): Electrabel and the Belgian company SPE (25%):
- Cattenom 3-4: Electricité de Laufenbourg in Switzerland (7.8%) and the consortium of Swiss electricity companies CNP (21.8%).

#### 6.2.1.1.3.2 ENVIRONMENT, SAFETY AND RADIATION PROTECTION

#### A. Environmental safety

EDF is making great efforts to reduce the volume and the environmental impact of the liquid and gas emissions by its nuclear power plants. From 1990 to 2002, while already much lower than the regulatory limits, EDF reduced its radioactive liquid emissions by a factor of 30 (excluding tritium and carbon-14). The level of liquid emissions was again cut in half between 2002 and 2008, and is now at a very low limit.

With regards to the management of operating low and medium activity ("FAMA" waste) waste, steps have been taken to limit its storage on all nuclear sites. In addition, since 2004, very low-level waste (TFA) is sent to the very low-level waste storage center (CS-TFA) of the French National Agency for the Management of Radioactive Waste (Agence Nationale pour la Gestion des Déchets Radioactifs, or ANDRA) at Morvilliers.

For a description of nuclear waste processing downstream of the cycle as well as decommissioning, see sections 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues – B. Back-end") and (6.2.1.1.3.6 "Decommissioning of nuclear power plants"), below.

An ISO 14001 certification procedure (see section 6.4.3.1.2 ("Tools for implementing Sustainable Development") below) was undertaken in 2002 for all units of the Nuclear Operations Division. In 2004, all of the units were certified. The certification was renewed in 2005 and 2008.

#### B. A global nuclear safety policy

EDF, in its capacity as a nuclear operator, assumes responsibility for nuclear safety and reaffirms nuclear safety as its main priority in a framework of constant evolution (market competition, environmental issues, etc.)

The implementation of the French nuclear electricity program led EDF to establish safety measures which:

- take into account, from the design stage, the risks that might arise during the operation of the power plants, whether relating to the actual operation of the installations or to internal or external attacks;
- are based both on the application of strict rules of operation, and on the cautious and inquiring attitude of the technical teams by means of the establishment of a true safety culture;
- are based on the cumulative experience of a standardized fleet of 58 reactors (i.e., over 1,300 reactor years of operation); and
- benefit from integrated nuclear engineering and R&D within the Group in order to anticipate the correction of failures, maintain the installations in good working order, develop materials/equipment on an ongoing basis, reassess safety margins, monitor technology advances as well as the implementation of more effective new technologies and the managing of decommissioned sites;

• rely strongly on the development of skills; with this objective in mind, each nuclear generation site is equipped with a global simulator used for training to cope with any type of situation.

Nuclear safety is subject to numerous controls, both internal and external. The external control of the safety of nuclear facilities in France is carried out by the French Nuclear Safety Authority (Autorité de Sûreté Nucléaire or ASN).

EDF is subject to the following external audits:

- At the national level:
  - regulatory inspections carried out on sites by ASN, randomly or on a scheduled basis (approximately 400 inspections per year);
  - a safety re-examination process conducted on a 10-year basis has also been in place since 1990. It aims to improve the compliance of operating nuclear plants with safety standards, and to reassess these standards based on feedback and new knowledge. The safety standards reassessed in this way are then set until the next re-examination. The objectives are established by the ASN (which monitors compliance) while EDF proposes solutions to meet them, implementing them after obtaining the approval of the ASN. A safety re-examination was undertaken in the context of the second 10-year inspections of the 900 MW and 1,300 MW plants; the reassessment of safety standards was completed in 2004 for the 900 MW series and in 2006 for the 1,300 MW series. Both series received approval for continued operation until the facilities are 30 years old. At this time they will be subject to a third 10-year inspection, subject to the implementation, for each of them, of the checks, and equipment and documentation changes that are identified during the safety review. By the end of 2008, the second set of 10-year inspections had been completed for 32 out of the 34 plants in the 900 MW series, and 10 out of the 20 plants in the 1,300 MW series.

The 10-year safety re-examination is an important step in extending the operating life of power plants (see section 6.5.4.2 ("Specific regulations applicable to nuclear facilities") below).

- At the international level, regular inspections are held making it possible to benefit from the experience gained worldwide:
  - the OSART (Operational Safety Review Team) of the IAEA (International Atomic Energy Agency) performs reviews at the request of the ASN with the objective of formulating recommendations and promoting good working practices; and
  - the international Peer Review inspections carried out by WANO (World Association of Nuclear Operators) and organized at the request of EDF perform the assessment of safety performance and also help promote best international working practices.

EDF has also implemented internal audit procedures, such as:

- every three to four years, EDF performs overall safety assessments for each power plant, which take place over a three-week period and involve approximately 30 inspectors;
- the General Inspector for nuclear safety and radiation protection, reporting to and appointed by EDF's Chairman, performs audits to assess the overall safety of the nuclear fleet on an annual basis and to suggest improvements to the company's management.

In relation to the condition of its facilities, EDF intends to reach a level comparable to the best international operators, which requires continued improvement of behavior and practices on maintenance sites, as well as investments focused on the renovation of premises and equipment. At the end of 2006, a program specially developed to improve the conditions of the facilities ("Obtenir un état exemplaire des installations") was

implemented in order to bring all nuclear sites up to the best international standards regarding the running of facilities. This investment and maintenance program involves an investment of around €600 million between 2006 and 2011. Efforts made by EDF, notably in order to improve human performance, have enabled a reduction over the last few years of the annual average number of Automatic Reactor Trips (ART)1 at a rate of less than one per unit<sup>2</sup>. 2008, with 31 ART, shows a distinct improvement in comparison with 2007 (53 ART).

EDF is subject to the Law of June 13, 2006 relating to nuclear transparency and safety (see section 6.5 ("Legislative and regulatory environment")). This law guarantees access to information concerning health and the environment to all individuals, and formalizes transparency on nuclear safety.

#### C. Warning system

In the event of an accident, a crisis plan is in place to limit impacts on the environment and on people. To ensure the safety of the installation and the protection of people, the system is based on two closely coordinated plans, designed for both local and national use. These are the Internal Emergency Plan (Plan d'Urgence Interne, or PUI), prepared by EDF, and the Special Intervention Plan (Plan Particulier d'Intervention, or PPI), prepared by French prefectures in collaboration with the French state and EDF. In order to provide greater effectiveness and thus, improved protection of people, these plans account for the risk of malicious mischief.

The relevance of the system for warning, informing and protecting people is regularly assessed through accident simulation exercises, which make it possible not only to ensure the correct operation of the crisis plan, but also to improve upon it, in particular, by clarifying roles and validating all of the required physical and human resources. Each year, approximately 100 exercises are organized for the entire French nuclear fleet, i.e., approximately one drill every three days. Approximately 10 exercises are on a national level, under the management of the ASN and involve EDF, the prefectures and public authorities.

#### D. Major events concerning safety

Events are classified on a scale of 1 to 7 on the INES scale (International Nuclear Event Scale), with 7 being the most serious. Those of no consequence for nuclear safety are classified as discrepancies or level 0 events.

Since the establishment of a scale of this kind in France in 1987, no level 3 event (serious incident – very low external emission, and exposure of the public representing a fraction of the regulatory limits) or above has occurred regarding the French nuclear fleet.

From 2002 to 2006, for its entire fleet, EDF recorded a yearly total of approximately one level 2 event (incident provoking major breach of safety regulations and/or significant contamination or over-exposure of a worker). Each year, EDF handles an average of one level 1 event per reactor (noncompliance with the approved rules of operation occurring due to equipment failure, human error or shortcomings in the procedures).

Overall, the number of events classified each year for the nuclear fleet is therefore approximately 1 per reactor.

In 2008, as in 2007, no level 2 event or above was recorded. The average number of level 1 events in 2008 is 1.2 per reactor and the average number of non-classified events (level 0 and above) is 9.2 per reactor.

Overall safety results over the last five years are stable.

#### E. Radiation protection

The mobilization of all actors has enabled the continuous improvement of performance in terms of protecting personnel from the effects of ioni-zing radiation. Thus, the average annual collective dose of all workers, both employees of EDF and outside companies intervening in power plants, has been halved in less than 10 years. In 2008, the average collective dose was 0.66 man-sieverts (mSv) per reactor per year, which is a comparable level to the average values recorded by German, Japanese and American operators for reactors using the same technology, i.e., pressurized water. This result, similar to the 2007 result (0.63 man-sieverts), should be assessed taking into account the particularly high volume of maintenance work carried out in 2008 (notably the treatment of steam generators).

EDF continues its efforts to lower the number of individual doses of exposure to radiation above the regulatory limit. Accordingly, in 2008, the number of workers, whether from EDF or an outside company, having received a cumulative dose over 12 months of between 16 and 20 mSv (annual regulatory limit) reached a maximum of 14 in October 2008 (20 in 2007), and this number varies between 3 and 14 people over 12 rolling months; none of these doses were over 18 mSv.

In the coming years, given the levels already achieved, efforts will have to be focused on power plants with the worst dosimetric results, in particular by cleaning their circuits. Continued improvement in radiation protection involves raising the quality of the radiation protection culture to the same level as the safety culture. This ambition leads to, in particular, the reinforcement of the teams of radiation protection specialists in the field in terms of both number and skills.

#### 6.2.1.1.3.3 PERFORMANCE OF THE NUCLEAR FLEET

The nuclear generation variable cost, mainly made up by the fuel costs, is low since it represents less than 30% of operating costs<sup>3</sup>. Therefore, the main competitive levers of the nuclear fleet are the amount of generated energy and the optimization of fixed operating costs. The levers relating to the fuel cycle are further discussed in section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues"). All things being equal, EDF is seeking to increase its nuclear-generated production and to cut its non-fuel operating costs.

#### A. Operation methods of the nuclear fleet

#### GENERATION CYCLE

PWR facilities alternate between cycles of 12 or 18 months of production and shutdowns so that part of the fuel charged into the core can be replaced and necessary maintenance work can be carried out.

At the end of each generation cycle, there is an alternating between two types of programmed shutdowns:

- an ordinary shutdown for refueling only (Arrêt pour Simple Rechargement, or "ASR"), during which refueling is the main operation performed, although light maintenance or periodic testing may also take place in addition to the refueling. This shutdown generally lasts an average of around 35 days:
- a partial inspection for refueling and maintenance, generally lasting an average of around 55 days.

Every ten years, the power plant is shut down for an average of about 90 days in order to carry out a 10-year inspection, during which EDF carries out an in-depth examination of the main components.

<sup>1</sup> Automatic and instantaneous shutdown of the plant by starting up protective measures to ensure its safety

<sup>2</sup> For 7,000 hours of criticality

<sup>3</sup> Operating costs are cash costs and are defined as follows: fuel costs (including back-end expenses in the fuel cycle), operating expenses (external services and purchases, employees) and maintenance costs (expenses and investments). They do not include investments related to construction, decommissioning expenses, or depreciation and provisions.

#### OPERATION OF EDF'S NUCLEAR FLEET

Owing to their low variable cost, nuclear generation means are first and foremost used as base-load generation means, after run-of-river hydropower. The variations in consumption of EDF's final customers during one year (summer-winter, day-night) and the current restrictions in fluidity of the wholesale markets due to limited interconnections, lead to nuclear power also being used for mid-merit generation. Strong variations in seasonal consumption in France (in 2008, a factor of 1.6 was observed between respective monthly consumptions in August and December) and variations in levels of consumption during the winter months (a drop in temperature of 1°C in winter entails a rise in electricity consumption in France which can reach 2,100 MW (source: RTE-EDF Transport), require that nuclear fleet shutdowns be concentrated between April and October. Following the 2003 heat wave, the unit shutdown schedule was modified to reduce the number of shutdowns in July and August and maximize the operation of seaside units, the cooling capacities of which are independent of climatic conditions.

In order to reconcile those issues concerning the strong variations in seasonal consumption in France, the availability of power plant units, and the efficient use of reactor fuel, EDF has now adopted operating cycles of 12 and 18 months for its fleet of power plants. At the end of 2008, they were divided as follows:

- 28 units of the 900 MW series have an operating cycle of 12 months;
- units of the 900 MW series and the 20 units of the 1,300 MW series have an operating cycle of 18 months;
- the N4 units are currently being switched from a 12-month to an approximately 18-month cycle, expected to be with full effect by 2010.

#### B. Generation and technical performances

The nuclear fleet's generation amounted to 417.6 TWh in 2008, a stable volume in comparison to that of 2007.

Nuclear generation expressed in annual energy corresponds to a load factor, Kp (defined as the generated energy compared to the maximum theoretical energy, the latter notion corresponding to the constant operation of the installed capacity throughout the year). Thi factor is obtained by multiplying two coefficients ( $Kp = Kd^*Ku$ ):

- the availability factor, Kd, (the available energy<sup>1</sup> as a percent of the maximum energy that could be generated if the installed capacity was operated all year long);
- the utilization factor, Ku (the energy generated as a percent of the energy available). Ku is the reflection of environmental constraints, supply of system services, and optimization implemented by EDF (fuel and modulation).

The coefficient Kp, 75.3% in 2008, is at a similar level to that of 2007 (75.6%). It results from a Kd of 79.2% in 2008, 1% lower than in 2007, compensated for by a rise in Ku closely of 1% (95.1%).

Two technical factors have principally had an impact on generation levels in 2008: (i) the continuation of treatment of steam generators clogging and (ii) the acceleration of contingencies encountered on the stators of certain alternators (notably 1,300 MW).

(i) The clogging of steam generators reduced the 2008 Kd by 1.9 percentage points. The clogging was first noticed at the Cruas plant in 2006. Based on a review performed by EDF in 2007 on the scope of the issue, the clogging is estimated to affect 15 out of the 58 units in the French fleet (eight 1,300 MW units and seven 900 MW units), and will require that the steam generators be chemically cleaned. At the end of 2008, 9 units had benefited from the cleaning of their steam generators (4 in 2007, 5 in 2008), the 6 remaining units to be treated over the next 2 to 3 years.

(ii) the acceleration of contingencies encountered on the stators of certain alternators had an impact of approximately 1.6 percentage points on the 2008 Kd. Of the 58 units, 48 present risks of loss of insulation from the stators of the alternators due to a fragility in the design. A renewal program using new technology (STAR<sup>2</sup>) has been in place since 2005. It consists of rewinding the stator on site or replacing it. At the end of 2008, 13 alternators had been renewed. The renewal program is continuing at a maximum rythm of 5 stators per year (complete rewinding or replacement). At the end of 2012, 35 alternator stators of the 48 concerned should have been renewed.

The level of generation was also impacted, in the second half of 2008, by damages occurred in several poles of the main transformers. A program of preventive replacement of this material is being examined.

The company's target Kd is to reach 85%, with a gradual rate of improvement of around 2% per year, by 2011 by carrying out the following actions:

- · technical levers:
- continued work to switch the four units of the N4 series to operating cycles of approximately 18 months instead of 12 months, expected to be in full effect by 2010.
- absorption of the aforementioned contingencies;
- levers included in the "Excellence Opérationnelle" program and using best international practice:
  - reduction of the level of unplanned unavailablity with the help of a measure enabling the development of a strategy for the maintenance of material adapted to the criticality of each of its components. This measure is initiated by a classification of components according to the consequences of their failure; the level of unplanned unavailablity has been noticeably reduced in the United States of America following its installation;
- reinforcement of the management of unit shutdowns in order to reduce their duration with the progressive installation, over 3 years, on each site, of a Operating Centre for Continuous Management of Units Outages (COPAT). The aim of the COPAT is to reduce the average duration of shutdowns, by continued management of the shutdown's critical activities, and a reactive response to technical alerts.

The effects of these levers will however be tempered by heavier shutdown programs over the coming years due to an increased annual number of 10-year inspections and significant plants maintenance operations aiming to ensure a longer operating life for the power plants.

### 6.2.1.1.3.4 THE NUCLEAR FUEL CYCLE AND RELATED ISSUES

French nuclear energy production represented 417.6 TWh in 2008, which corresponds to an annual volume of approximately 1,200 tons of fuel consumed (tons of heavy metal, enriched uranium and plutonium), including approximately 1,080 tons of UO<sub>2</sub> fuel (fluorinated and then enriched natural uranium), 100 tons of MOX fuel (fuel generated from reprocessed plutonium) and 20 tons of URE fuel (re-enriched uranium).

The nuclear fuel cycle includes all of the industrial operations conducted in France and abroad which make it possible to deliver fuel for energy generation in the reactor, then to discharge and process it. The cycle is completed in three stages:

- front-end: the purchase of concentrates from uranium ore, the fluorination (or conversion), enrichment and fabrication of fuel assemblies;
- the heart of the cycle corresponding to the use of fuel in the reactor (three to five years): receipt, loading, operation and unloading; and

2 Originally installed for units 1 and 2 at Civaux.

<sup>1</sup> The available energy is equal to the maximum theoretical energy less losses for technical reasons inherent to power plants, such as planned shutdowns, unplanned outages due to failure or safety requirements, and regulatory tests.

• back-end: storage in pool, processing of spent fuel, conditioning of radioactive waste and recycling of recoverable material, temporary storage of conditioned waste before long-term management, as provided for by Law n° 2006-739 of June 28, 2006 concerning the long-term management of radioactive material and waste ("the Law of June 28, 2006").

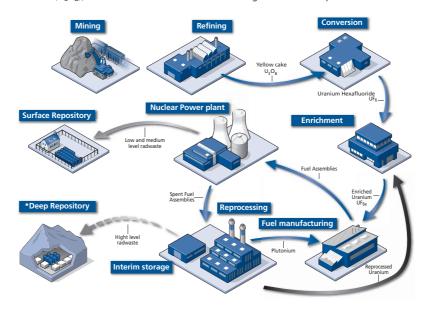
EDF ensures the coherence of all of the operations in the fuel cycle. Generally speaking, front-end and back-end operations are carried out by subcontractors and/or suppliers, generally on the basis of multi-year contracts. EDF carries out the heart of the cycle operations and acquires most of the raw materials as uranium concentrates (U<sub>3</sub>0<sub>8</sub>), transformations into more elaborate products being carried out by industrials through services contracts (fluorination, enrichment and realization). EDF owns the fuel and materials and is responsible for them throughout all the fuel cycle stages.

The diagram shows the different stages of this cycle:

#### A. Front-end

In order to ensure the continuity and reliability of the supply for its reactors, EDF retains overall control of the operations at each stage in the cycle, and manages a portfolio of contracts for the long term.

Through stock build-up at each front-end stage of the fuel cycle (natural



\* As for what concerns the in-depth-storage of long-life high-level waste see Section "B. Back-end - Storing conditioned ultimate waste" below.

uranium, converted uranium, enriched or not, stored fresh fuel assemblies), EDF seeks to avoid resorting to the short-term market in case of production fluctuations in the mines or the cycle plants. These stocks provide guarantees in terms of security of supply and price, in high-variation upstream materials and services markets.

#### NATURAL URANIUM SUPPLY

Most of EDF's uranium supplies are guaranteed in the long-term by contracts for periods of 7 to 15 years already signed, or by reciprocal commitments that will be confirmed in the long-term by definitive contracts (options guaranteeing access to volumes subject to conditions of price negotiation, for the end of the period of cover). The primary objective of this long-term supply policy is to guarantee the long-term security of EDF's supplies and it also contributes to partial hedging of the price risk.

A significant part of the supplies is provided by Areva from various geographic sources. Since 2004, EDF has followed a policy of diversification of its suppliers, enabling it to reinforce supplies from high-potential areas such as Australia, Kazakhstan, and Canada.

Indexation formulae for portfolio contracts of natural uranium supply include fixed prices (basic prices whether inflated or not) and variable prices (indexed according to market price indexes) and are sometimes limited by floor and ceiling prices. Consequently, the effects of variations in the rise in market prices of natural uranium on supply costs are limited and smoothed out while enabling a benefit from potential decreases in price.

#### CONVERSION (OR FLUORINATION)

The financial weight of the conversion stage represents a small proportion of the fuel costs.

A significant part of EDF's needs are covered by the Comurhex plant of the Areva group, as well as other international producers, such as Cameco in Canada and United Kingdom, Converdyn in the United States and Tenex

The contracts that EDF signed in 2007 and 2008 strengthen the cover of EDF's needs in conversion services for approximately the next ten years.

#### U-235 ENRICHED URANIUM

A significant proportion of the enrichment services procured by EDF come from the Eurodif plant (Areva group), which uses gas diffusion technology. The Areva group has decided to replace the existing Georges Besse I plant with a new installation (Georges Besse II), the start of which is planned for 2009, which will use ultracentrifugation technology that requires less electricity.

In 2007, EDF and Areva extended their contractual relationship relating to the use of George Besse I until 2010, and in 2008 concluded a longterm contract which defines the conditions under which EDF will take a proportion of the Georges Besse II's future generation. In parallel, in order to improve the competitiveness of its supply as rapidly as possible through use of a greater proportion of the ultracentrifugation enrichment services, EDF secured significant coverage of its needs at the beginning of 2006,

from other enrichers on the market: Urenco (United Kingdom, Germany, the Netherlands, United States of America), Tenex (Russia) and USEC (United States of America).

In the end, cover of the EDF fleet's needs in enrichment services was reinforced in 2008 in order to reach the post-2020 period, on the basis of predominantly fixed-price contracts, decreasing in real terms.

#### **ENRICHED URANIUM REPROCESSING - URE**

Enriched uranium reprocessing makes it possible to recycle uranium from processing burnt fuel. It provides one to two reloads per year, which are carried out at two units of the Cruas power plant. In the short term, the intention is to increase the number of units using this fuel. The annual quantity of reprocessed uranium that is not currently in use is stored in a stable form in order to be used at a later stage, depending on market trends for natural uranium.

#### **FUEL MANUFACTURING**

Contracts with two fuel manufacturers, Areva NP and Westinghouse, were renewed in early 2007 to cover all requirements from 2008 to 2012, and include provisions relating to product developments.

Most of EDF's needs are covered by the contract signed with Areva NP in March 2007. It includes the manufacture of MOX and URE assemblies.

#### STRENGTHENING COMPETITIVENESS BY IMPROVING THE FUEL **ENERGY OUTPUT**

EDF has implemented a strategy aiming at gradually increasing the efficiency of nuclear fuel for its different series, with the aim of increasing fuel energy efficiency by increasing the combustion rate and optimizing operating cycles in order to increase the availability of the nuclear power stations, while enabling outage profiles that are consistent with the seasonal variation of demand. The average combustion rate of UO<sub>2</sub> has risen from 33 GWj/t at the start of the 1980s, to 45 GWj/t today.

#### B. Back-end

EDF takes responsibility for the use and processing of its spent fuel and associated waste. Areva is responsible for processing and ANDRA is responsible for long-term management operations for the storage of ultimate waste, in accordance with the Law of June 28, 2006 concerning the longterm management of radioactive material and waste.

EDF's currently adopted strategy with regards to the fuel cycle, in agreement with the French State, is to process spent fuel and to recycle the plutonium separated in the form of MOX fuel. From 1,200 tons of fuel reactors annualy discharged, the quantities handled are determined by the amount of recycled plutonium in reactors allowed to load MOX fuel. The current recycling capabilities lead to treat about 850 tons of spent fuel per year. The decree authorizing EDF to use MOX fuel in reactors 5 and 6 at the Gravelines plant was published in the French official journal on November 3, 2007. This brings the number of EDF reactors authorized to use MOX fuel from 20 to 22, which opens up the possibility of increasing the quantities of spent fuel treated annually.

### PROCESSING SPENT FUEL FROM EDF'S NUCLEAR POWER STATIONS

Spent fuel awaiting processing is temporarily stored under water in cooling pools, under conditions that are recognized as being safe over time periods of several decades. At the end of a period of approximately 15 years after they have been unloaded from the reactor, spent UO<sub>2</sub> fuel are processed at Areva NC's The Hague site in order to separate the products that can be recycled from the waste. The waste is subsequently conditioned and temporarily stored at this site in specific premises.

The relationship between EDF and Areva NC concerning the transmission, processing and recycling of spent fuel for the 2008-2040 period was formalized by a framework agreement signed December 19, 2008, following the 2001 protocol.

#### It deals with:

- the transmission of spent nuclear fuel from EDF's power plants to The Hague reprocessing plant, and its storage;
- the separation of the fuel materials that can be recycled (uranium, plutonium) from high-level waste, and their conditioning;
- the conditioning of radioactive waste extracted from spent fuel; and
- the intermediate storage of the conditioned waste pending their discharge to a long-term management center;
- recycling of plutonium in the form of MOX fuel;
- recycling of uranium from processing in the form of URE fuel;
- EDF's contribution to the costs of decommissioning facilities at The Hague, for which it fixes the amount of a cash compensation balance (see note 5.1.4 to the consolidated financial statements for the financial year ended December 31, 2008) to be paid by EDF to Areva, according to a payment schedule to be defined before the end of 2009.

For the period 2008-2012, the agreement fixes the prices and quantities of services charged to Areva by EDF. In this context, it provides for an increase of the annual quantities of processed spent fuel and MOX fuel to 1,050 tons and 120 tons respectively between 2010 and 2012. This agreement should be stated by the end of 2009 in a contract covering the period 2008-2012 and a transaction protocol definitively regulating EDF's contribution to the cots of decommissioning facilities at The Hague.

#### STORING CONDITIONED ULTIMATE WASTE

Radioactive waste, depending on their nature, level of radioactivity and the life-period of their constituent radionuclides, have been classified into different categories: from high-level waste to low- and medium-level waste to very low-level waste. They are called "long life" when their period of activity lasts for more than 30 years, and "short life" otherwise.

• Long-life high-level waste

French Law  $n^{\circ}$  91-1381 of December 30, 1991 has specified research initiatives concerning the various possible options for managing long life, high-level waste, and has specifically identified three solutions for the future of this waste (see section 6.5 ("Regulatory and legislative environment")

- separation transformation (which involves separating long life radioactive elements and transforming them into shorter-lived elements);
- storage in deep geological layers; or
- improvement of the long-term storage and conditioning processes.

On the basis of the works carried out in the context of the Law of December 30, 1991, another law passed on June 28, 2006 defines a research program for the long-term management of long-life, high-level waste.

It establishes a national plan for the management of radioactive materials and waste and provides that "following temporary storage, ultimate radioactive waste that cannot be stored at surface level or at a shallow depth for nuclear safety or radioprotection reasons, is to be stored in deep geological layers." It indicates notably that: "in order to ensure [ ... ] the management of long-life high- or medium-level radioactive waste, research and studies relating to this waste are being carried out [ ... ] and notably reversible storage in deep geological layers [ ... ] in order to choose a site and create a storage center so that the request for its authorization [ ... ] be examined in 2015 and, subject to this authorization, the center be put

into operation in 2025" (for more information regarding Law dated June 28, 2006, see section 6.5.4.2 ("Specific regulation applicable to nuclear plants") below).

The processing of spent fuel enables the vitrification of long-life, high-level waste, which ensures very high-quality conditioning under a reduced volume. All of the long-life, high-level waste produced in this way, corresponding to the operation of the natural uranium graphite gaz (UNGG) and to 40 years of operation of the current PWR facilities, will represent a volume of approximately 6,700 cubic metres. While awaiting decisions concerning storage in deep geological layers in the context of the Law of June 28, 2006, conditioned long-life high-level waste is temporarily stored at the Hague site in specific premises.

#### • Long life medium-level waste

The structures of the assemblies (shells and nozzles, clad pieces, etc.), which also result from the processing of spent fuel, constitute activated waste. Unlike long life, high-level waste, these types of waste do not give off heat and constitute long life medium-level waste. They are currently compacted and conditioned in stainless steel containers. Other long life mediumlevel waste is produced by research or the fuel manufacturing cycle. The total volume for EDF's share including the waste resulting from the operation of the Uranium Naturel Graphite Gaz facilities and that resulting from 40 years of operating the current PWR facilities, will be approximately 37,000 cubic. They are suitable for faster storage than long life, highlevel waste because the lack of heat emission does not require a long cooling off period before storage.

As with long-life high-level waste, long-life medium-level waste is temporarily stored at the Hague site in specific premises, awaiting decisions to be taken in the context of the Law of June 28, 2006 concerning storage in deep geological layers.

#### • Low and very low-level waste

Short life, low-level waste comes from nuclear installations (gloves, filters, resins, etc.). It is stored on the surface at the Soulaines Storage Facility managed by ANDRA, designed for low and medium-level waste. Long life, low-level waste comes from the decommissioning of former UNGG reactors (graphite, processing waste). Storage solutions are being studied (see section 6.2.1.1.5.2 ("Environment, safety and radiation protection") above), and in 2008 ANDRA launched a search for sites (see section 6.2.1.1.3.6 ("Decommissioning of nuclear power plants – 1. Decommissioning of firstgeneration power plants that have been shut down") below).

Very low-level waste is waste whose radioactivity is very close to natural radioactivity. Mainly arising from the decommissioning of nuclear installations, it results mainly from rubble (concrete, scrap, lagging, piping, etc.). This waste is stored on the surface at the morvilliers storage facility ("cstfa") managed by ANDRA.

#### ACCEPTANCE OF FUTURE CHARGES RELATING TO THE MANAGEMENT OF SPENT FUEL AND LONG TERM MANAGEMENT OF RADIOACTIVE WASTE

Each year, EDF makes provisions for the downstream of the nuclear fuel cycle in France (see note 32.2 to the consolidated financial statements for the year ending December 31, 2008) which cover the management of spent fuel (including fuel in the reactor but yet irradiated) and the longterm management of radioactive waste.

To assess the future management costs of long life, medium- and highlevel waste resulting from the processing of burnt fuel, EDF used deep geological storage of waste as an assumption, pursuant to the Law of June 28, 2006, which established the storage of waste in deep geological layers as a reference solution.

For long life, low-level waste, from the deconstruction of power plants, provisions are established by EDF from the schedules of production of these wastes and cost assumptions relating to the terms of storage defined by ANDRA.

The cost of evacuating and storing short life waste can be determined on the basis of contracts entered into with ANDRA and the various carriers for the operation of existing Storage Centers. Only the costs of disposal and storage of waste from the deconstruction of power plants are provided, the charges relating to operational waste being treated in annual expenses.

EDF's provisions as at December 31, 2008 were established in accordance with the prescriptions of the Law of June 28, 2006 and implementation texts published in 2007.

#### 6.2.1.1.3.5 Preparing for the future of the nuclear fleet

EDF believes that nuclear energy provides a lasting and economically efficient solution for future energy needs, in a context of decreasing fossil resources where proven worldwide reserves of fossil energy are limited, based on current consumption, at approximately 40 years for oil, 60 years for natural gas and 144 years for coal (AIE – World Energy Outlook 2008). According to the same sources, the estimated uranium reserves will last for approximately 100 years at the current level of nuclear production. The development of a new generation nuclear reactor (called the fourth generation, see below) will enable the level of consumption of natural uranium to be reduced significantly and the level of these energy reserves to be increased to several thousand years. Furthermore, nuclear energy has the advantage of not emitting greenhouse gases.

The Program Law of energy policy guidelines of July 13, 2005 (LPOPE) (see section 6.5, ("Legislative and regulatory environment")) provided for the rapid launch of an EPR in France, confirming the preservation of the nuclear option. For EDF, preparing for the future of the nuclear fleet depends on three strategic factors:

- extending the operating life of the nuclear power plants beyond 40 years;
- preparing for the renewal of the nuclear fleet with the development of a first-of-a-kind EPR unit; and
- increasing the generation capacity of the existing fleet by assessing the feasibility of boosting the power of low-pressure rotors at some of the 900 MW units, and studying ways to increase the power of twenty 1,300 MW units. These changes could lead, from 2015, to a total increase of generation capability between 8 to 15 TWh.

### A. Operating life of EDF's PWR installations

In 2009, the third 10-year visits for the 900 MW series will commence (one at the Tricastin 1 unit and one at the Fessenheim 1 unit). The corresponding system of reference has been analysed by the French Nuclear Safety Authority (ASN) during recent years and notably in 2008. Without forecasting the opinion that will be issued in fine by the safety authority, EDF is confident of obtaining the authorization for a 40-year operating life for the units in this series.

EDF's objective is to significantly extend the operating life of its fleet beyond 40 years, consistent with the trend observed on an international level concerning plants with the same technology (United States of America, Japan, Sweden, Switzerland, etc.). To this end, EDF has already implemented industrial and research and development action plans. Solutions to the obsolescence of certain components (in particular, for the vessel of the reactor and containment facilities, which are considered to be non-replaceable), and to the renewal of certain major components are being studied.

In 2009, EDF will present to the ASN the content of the safety system of reference for operating the fleet beyond forty years. Assuming that this system of reference is approved by the ASN, it will be put into place for the fourth 10-year visits of units in the 900 MW series and the third and fourth 10-year visits of units in the 1,300 MW series. The corresponding investments are estimated at approximately €400 million (2008 euros) per unit, spread out over about twenty years from the next decade onwards.

18 nuclear units will reach a 40 year-operating life between 2015 and 2020. Shutting down these units would entail major investments in new nuclear units. Extending the operating life of the current nuclear fleet by 10 to 20 years would therefore enable:

- the deferral of financial flows associated to decisions concerning investment in these new plants to beyond 2025; and
- the smoothing over time of the putting into service of new plants, which is beneficial from an industrial point of view.

#### B. The European Pressurized Reactor ("EPR") and associated challenges

#### 1. EPR: A MAJOR INDUSTRIAL CHALLENGE

In anticipation of the industrial development of new-generation reactors (fourth-generation: sodium fast reactors, gas high-temperature reactors, gas or lead-bismuth cooled reactors, etc.), which will not appear industrially on the market before 2040-2045, most of the leading nuclear contractors and nations are developing intermediate generation reactors (3 and 3+ generation) which are an improvement (in terms of cost and safety) on the existing reactors and which will be available on the market in the shorter term, such as Westinghouse's AP 1000, the General Electric's ESBWR and the EPR.

EDF has opted for EPR technology to prepare the future of electricity generation from nuclear energy. This reactor is the result of the joint experience of operating the two biggest European nuclear fleets – the French and German fleets – and its safety standard has been examined by the German and French safety authorities.

As part of the renewal of European generation facilities, EDF wishes to maintain the technological advantage it acquired in the 1970s and 1980s, with the development of a standardized and industrially controlled nuclear fleet.

The Flamanville 3 project enables EDF to be ready in industrial terms for the construction of new reactors in France and abroad, in coherence with its strategy for the international development of nuclear energy (see section 6.1 ("Strategy"):

- by managing a reactor model that has been technically proven and that complies with the requirements of the ASN;
- by providing an operational industrial organization, established during the construction of the first model; and
- by acquiring sufficient experience operating a first-of-a-kind unit, before launching construction of a possible series.

#### 2. THE EPR INDUSTRIAL PROJECT

The EPR is a 1,600 MW reactor developed from the early 1990s by Areva NP (Areva group with a 66% interest and Siemens with a 34% interest), in partnership with EDF and German electricity companies, who participated in financing its development and contributed the technical knowhow acquired through the operation of their nuclear fleets. Like other reactors in use in France, the EPR is a pressurized water reactor. It has already been studied by the safety authorities, and benefits from technological and operational advances that have been incorporated into the most recent French and German reactors.

The breadth of the EPR industrial project also presents ambitious goals, relating to:

- safety;
- environmental protection;
- technical and economic performance;
- optimized organization of project management in this nuclear unit.

Safety. The development of the EPR new kind of reactor encourages EDF to increase the safety of its nuclear fleet by reducing the likelihood of a serious accident and limiting its potential consequences. These safety goals were adopted since the reactor's design phase.

Environmental protection. Through its participation in the EPR project, EDF continues to maintain its commitment to environmental protection, by significantly improving its performance in comparison with its existing fleet, through continual progress using feedback obtained from its experience.

Environmental, technical and economic objectives. With regard to the current units, the EPR project's principal objectives are to:

- reduce the volume of radioactive waste and discharges;
- aim, in the context of radiation protection, to halve the collective annual dose compared with the current average level for units in operation in France:
- increase the availability factor to 91% owing to to certain design principles derived from the German reactors and allowing generation while maintenance operations are being carried out; and
- have a technical operating life of 60 years.

Furthermore, the EPR should enable some reductions to be made in operating expenses per kW and per kWh thanks to its technical performances and its size effect currently noted between the PWR 900 and the PWR

"Architect-assembler engineering". In renewing its fleet, EDF intends to maintain direct control of:

- the design and operation of its power plants;
- the organization of development projects;
- schedule and costs of construction;
- its relations with the ASN; and
- the direct integration of operating feedback.

This control defines the role of architect-assembler and corresponds to the position adopted by EDF during the development, renovation or decommissioning of its generation assets, and is based on its internal engineering capabilities.

The EDF group's integrated engineering skills are an important asset for the management over the long term of the performance and safety of its nuclear, hydropower and fossil-fired generation assets.

#### 3. PROGRESS MADE ON THE FLAMANVILLE 3 PROJECT

Launch phase. In October 2004, EDF's Board of Directors decided to undertake the process of building an EPR nuclear generation unit in France located in Flamanville.

A public debate was organized by the French Commission for Public Consultations (CNDP) concerning the construction of a first-of-a-kind EPR

The building authorization decree for the Flamanville nuclear facility was published in the French official journal on April 11, 2007, and the main building permit was obtained on April 24, 2007.

Some associations have filed complaints against some of the authorizations (see section 20.5, "Legal and arbitration proceedings.").

Realization studies. The design studies have been completed. Realization studies are now underway in order to ensure the efficient progress of onsite construction and those instructions necessary to the start-up of the facilities in 2012

Supply and work contracts. At the end of 2008, EDF had awarded approximately 150 contracts, representing nearly 99% of the total amount. The 6 largest work contracts (boiler, engine room, civil engineering, order control, piping, electrical fittings) represent approximately 70% of the project's budget. All of the mains contracts, with exception of the boiler contract signed with Areva, were awarded following international invitations

Work at the site. Initial preparatory work including the earthwork and digging (to build tunnels, structural walls, etc.) were completed at the end of 2007. The first concrete was poured in December 2007 as planned, and marked the start of construction of the plant's industrial buildings. The civil engineering work is expected to be completed in 2011. Electro mechanic works will start in 2009 and should be completed in 2011. The start is planned in 2012.

In 2008, civil engineering work continued on the various parts of the installation. The whole raft foundation of the buildings on the nuclear island has been completed. Following the detection by the ASN of a discrepancy in the number of steel rebars on the zone of a safety building, EDF reinforced supervision of the concreting process and the implement of steel rebars. Concreting operations were suspended for approximately one month in order to propose organizational improvements to the ASN, for resumption on June 20, 2008. Moreover, proposals for the optimization of the quantities of steel to put in place were proposed by EDF and accepted by the ASN in order to facilitate concrete pouring operations.

Furthermore, drilling the well on land works, that are part of the work of discharging water in sea, proceeded at a significantly slower rate than anticipated. In October 2008, EDF decided to choose a new process of drilling of the discharge gallery under the sea with the tunnel-boring machine. This solution, which is better adapted to the type of terrain in question, should enable the schedule to be respected by ensuring the safest conditions and highest quality of realization.

Costs and competitivness of the EPR. The Flamanville 3 EPR had been estimated in 2006 to cost €3.3 billion (in 2005 euros<sup>2</sup>). This figure was reevaluated in 2008 at €4 billion, under 2008 economic conditions. This re-evaluation takes into account the GDP inflation during the period 2006 to 2008, the effect of price indexes provided for in the contracts, technical, regulatory and peripheral developments, and the readjustment of provisions for unknown factors.

This re-evaluation represents an increase of approximately 20%, in comparison with an increase estimated by EDF at approximately 45% for combined-cycle gas turbines and 55% for coal-fired plants. This confirms the competitiveness of the Flamanville 3 EPR compared with combined-cycle gas turbines and coal-fired plants.

In 2006, EDF had estimated the total production<sup>3</sup> cost of Flamanville 3 at 46 euros/MWh (in 2005 euros). This figure was re-evaluated in 2008 at 54 euros/MWh (in 2008 euros). On the other hand, based on the lowest possible estimates of the cost of fuel and CO<sub>2</sub>, EDF currently estimates, that the production cost for a new combined-cycle gas turbine installation baseload operating is a minimum of 68 euros/MWh (in 2008 euros) and

1 Part of the reactor building situated immediately above the foundations.

70 euros/MWh (in 2008 euros) for a coal-fired plant. The Flamanville 3 EPR should therefore deliver competitive baseload energy, which will be useful for meeting increasing demands.

Second EPR en France. On July 3, 2008, the President of the Republic of France announced the construction in France of a second EPR nuclear reactor, the realization of which will be carried out by EDF. On April 1, 2009, EDF's Board of Directors approved the project for realization of this power plant on the Penly site in Seine Maritime. EDF will construct this facility in the context of a project company in which it will have the majority holding. GDF Suez will be a partner in this project; other partners will be invited to participate.

EDF estimates that, depending on the pressure on equipment market, the complete production cost of a second EPR would be between 55 and 60 euros /MWh (in 2008 euros). EDF considers that nuclear energy is therefore a long-term competitive production method.

Industrial partnership. On November 30, 2007, EDF and Enel signed an industrial partnership agreement for nuclear power generation, with the following terms:

- Enel has invested in Flamanville 3 up to 12.5% of the construction and operation costs as well as decommissioning costs and long-term management of nuclear waste:
- Enel receives in return 12.5% of the electricity generated by Flamanville 3, over the time of its operation, delivered in France on the RTE-EDF Transport transmission network:
- EDF is the operator of the Flamanville 3 facility, assuming full nuclear responsibility and will ultimately make all of the decisions; and
- Enel can assign its engineers to teams managing the site as it is being built or while it is in operation, in order to acquire skills in nuclear power generation.

Enel has the option to invest in the next five EPRs that EDF may build in France, under the same terms and conditions as the ones for the Flamanville first-of-a-kind reactor.

In order to exercise these options, Enel must give EDF a right to participate, under the same terms and conditions as those for Flamanville 3, in the construction of EPRs which Enel may develop in Italy or elsewhere in Europe, or in other investment projects of the same type.

Before these investments are completed, Enel can progressively acquire the power generated by EDF's existing nuclear facilities, up to a total of 1,200 MW.

Enel and EDF have also signed a Memorandum of Understanding (MOU) concerning fossil-fired power plants (see section 6.2.1.1.5.2).

Following the previous agreement in November 2007, two Memorandum of Understanding were signed on February 24, 2009 between EDF and Enel.

The first agreement sets up a 50/50 consortium between EDF and ENEL to look into the feasibility of developing a least four nuclear reactors based on EPR technology in Italy.

The second agreement provides for the inclusion of ENEL's participation in the new French nuclear programme and for its partnership in the construction and operation of the new EPR reactor at Penly (Seine Maritime). ENEL already has a 12.5% interest in the EPR under construction at Flamanville (Manche) and will take a similar holding, alongside other partners, in the second French EPR to be built by EDF.

<sup>2</sup> i.e. at the economic conditions of that year.

<sup>3</sup> Updated sum of projected costs in constant euros per MWh, including construction costs, interim interests, decommissioning costs, oeprating and maintenance costs, taxes and fuel costs including charges related to the downstream cycle.

#### 6.2.1.1.3.6 DECOMMISSIONING OF NUCLEAR POWER PLANTS

EDF takes full financial and technical responsibility for the decommissioning of its nuclear power plants. For EDF, the issue is to demonstrate, through the decommissioning process, its control of the entire life cycle of the means of nuclear power generation.

The decommissioning of nuclear power plants involves three levels, according to a classification defined by the International Atomic Energy Agency (IAEA) in 1980:

- level 1: shutdown of the plant, fuel unloading, draining of circuits (99.9% of radioactivity is eliminated), followed by final shutdown: dismantling of non-nuclear facilities that are permanently decommissioned, with limited access:
- level 2: dismantling of non-nuclear buildings and nuclear buildings excluding the reactor building, packaging and evacuation of wastes to storage facilities, isolation – containment – the section of the facility surrounding the reactor is kept under surveillance;
- level 3: complete dismantling and removal of the reactor building, and of materials and equipments that are still radioactive; surveillance is no longer necessary; following these operations, the site may be re-used for industrial purposes.

In practice, the operations leading from Level 1 to Level 2 are conducted consecutively over a period of time of approximately 10 years after the reactor ceases production. A waiting period may occur between the end of operations leading to Level 2 and the beginning of operations leading to Level 3, in order to allow the radioactivity in the irradiated materials to decay. The length of this waiting period may vary, depending on the comparative interest of radioactive decay and the length of time the facility must be monitored and can depend on the re-use envisaged for the site. At the end of this waiting period, the length of time spent on operations leading to Level 3 is estimated to be approximately 10 to 15 years.

#### 1. Decommissioning of first-generation power plants that have been shut down

EDF has chosen to completely dismantle power plants that have been shut down (one PWR: Chooz A, one heavy-water reactor (HWR): Brennilis, the Creys-Malville fast neutron reactor and the six UNGG-type reactors) by 2035, following the delay by ANDRA in putting into service the graphite storage which led to a delay in the corresponding UNGG program. The sites remain the property of EDF, and they will remain under its responsibility and monitoring. With regards to the PWR power plants, certain decommissioning options, including those relating to the timeframe, have not yet been finally decided.

Given its role as responsible owner, EDF will act as the contracting authority for the decommissioning.

The regulatory framework for decommissioning was established and the authorization process was completed in 2003. The authorization received is granted by a single decree, following the ASN agreement allowing for complete decommissioning, and by key meetings to be held with the ASN and an internal authorization procedure for the operator between each meeting, independent of the operational staff and audited by the ASN (see section 6.5 ("Legislative and regulatory environment")).

The decree of dismantling of Bugey 1 was published in the Journal Officiel on November 20, 2008.

Regarding the Brennilis site, at the end of July 2008, EDF made a new request to the French Nuclear Safety Authority for authorization to decommission. The public inquiry should take place at the beginning of 2009 and the decree is expected at the end of 2009. This new request follows the decision of the French Council of State of June 6, 2007, to cancel the decree authorizing the reactor to be fully dismantled, following an appeal from an association, because the results of an impact study on the dismantling work had not yet been issued publicly. Following this decision, EDF had taken steps in 2007 to ensure that the facility would not pose a threat while the dismantling work was halted.

In an agreement signed in December 2008, EDF and the CEA clarified their respective roles in relation to the Brennilis and Phénix sites. By this agreement, EDF and CEA became completely both technically and financially responsible for the Brennelis and Phénix sites respectively, which clarifies the operational management of projects. The decommissioning of EDF's nine shutdown first-generation units will produce approximately 1,000,000 tons of primary waste materials, of which 80% is standard waste material and none is high-level waste. The remaining 20% comprises very low to medium-level waste including about 2% waste requiring the availability of a graphite storage centre.

The following waste evacuation procedures are currently being implemented:

- the Premises for Conditioning and Temporary Storage of Active Waste project was launched at the Bugey site. The public survey conducted in summer 2006 received a favorable opinion. Technical assessment by the ASN is under way. The Permanent Group met on November 19, 2008; and the decree is expected a the end of 2009. The contract for the design and construction of the Installation has been notified and detailled draft studies are underway. The start is scheduled for the end of 2012.
- the FAVL Waste Storage Center is written in the Law of June 28, 2006 concerning the long-term management of radioactive material and waste. Following the search for sites launched by ANDRA in 2008, several local authirities have shown interest. ANDRA's current schedule provides for the storage to be put into service by 20191.

#### 2. Decommissioning costs and assets constituted in order to cover long-term commitments

#### **DECOMMISSIONING COSTS**

Since the beginning of operations at its power plants, EDF has made provisions to cover decommissioning operations, engineering, surveillance and maintenance of facilities, site security (see note 32.3 to the consolidated financial statements for the year ended December 31, 2008). The allocated amounts correspond to EDF's estimate for decommissioning costs incurred in order to reach Level 3.

With respect to PWR-type reactors, the provisions were made on the basis of an estimated amount of €306 (2008 euros) per kW2 installed, or approximately 15% of the total cost of investment of the nuclear portion of the facilities. This estimated decommissioning cost (including long term waste management costs), initially assessed by the PEON Commission (1979), was confirmed by detailed studies carried out in 1999 on the basis of a representative example: the Dampierre site (a site with four reactors). EDF will update the detailed decommissioning cost estimates by 2010.

Furthermore, an international comparison conducted by the OECD in late 2003 showed that EDF's estimates are consistent with the estimates made by other countries. EDF's estimates are approximately 25% above the estimates made for Spanish power plants and 15% below estimates made for German power plants. With respect to Germany, the difference with EDF's estimate may be explained by the use of a different policy for managing

<sup>1</sup> Document « Un centre de stockage pour les déchets radioactifs de faible activité (FA-VL) », available on the ANDRA website (www.andra.fr).

<sup>2</sup> Compared with €300 (2007)/kW and €294 (2006)/kW.

very low-level waste, long-life very low-level waste and long life mediumlevel waste (reprocessing and storage in Germany – storage in France).

Unlike the PWR facilities that are in operation, shut down first-generation reactors are of different types, and the estimated decommissioning costs have been established reactor by reactor.

#### THIRD-PARTY INSTALLATIONS THE HAGUE (AREVA) AND PHÉNIX (CEA)

As the responsibility for the decommissioning of facilities is incumbent on their operator, EDF wished to free itself financially from these operations.

The EDF-Areva framework agreement signed at the end of 2008 specifies the amount of the cash compensation balance to be paid by EDF for its share of the decommissioning of facilities at The Hague, operation which principle was settled from 2003, (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues") and note 32.2 of the annex to the consolidated financial statements for the year ended December 31, 2008)). Similarly, agreements concluded with the CEA at the end of 2008 clarified the financial responsibilities of both parties, as indicated above (see note 32.3 of the annex to the consolidated financial statements for the year ended December 31, 2008).

#### ASSETS AVAILABLE TO COVER LONG-TERM NUCLEAR-RELATED COMMITMENTS (OUTSIDE THE OPERATING CYCLE)

In accordance with a decision made in June 1999 by EDF's Board of Directors, EDF gradually built-up the assets dedicated to cover long-term nuclear commitments, by making annual allocations starting in 2000. As of December 31, 2008, these dedicated assets had a market value of €8,658 million (see note 25.3 to the consolidated financial statements for the year ended December 31, 2008).

In accordance with regulations, EDF must provide assets to cover the following commitments:

- decommissioning of the operating PWR plants and non-operating plants (€10.4 billion as of December 31, 2008) (see note 32.3 at the consolidated financial statements for the financial year ended at December 31, 2008);
- removal and permanent waste storage (€6.2 billion as of December 31, 2008 (see note 32.2 to the consolidated financial statements for the year ended December 31, 2008). Pursuant to the order of March 21, 2007, this amount also covers the long-term management of non-recyclable fuel from the existing fleet that was only partially included in the scope set by the Board of Directors on September 5, 2005, as well as the waste from the dismantling of nuclear plants that was not included in the decommissioning estimate (in accordance with the legislator's request); and
- the management of burnt fuel and storage of waste connected with the non-consumed part of the plants' last core (€0.3 billion as of December 31, 2008) (see note 32.3 at the consolidated financial statements for the financial year ended at december 31, 2008).

Some provisions have been excluded from the scope of dedicated assets because they correspond to expenses considered to be directly related to the operating cycle (according to the order of March 21, 2007).

This includes mainly the provision for management of burnt fuel, which is subject to yearly allocations and reversals and may be classified as part of the operating cycle, like other such items (e.g., fuel inventory).

EDF has not included its share in the decommissioning of third-party facilities in the scope of dedicated assets, because these expenses must be accounted for by facility operators.

Finally, the share of the provision for the last core for an amount of €1.4 billion as of December 31, 2008, which corresponds to the unused fuel that was in the reactor when it was shut-down permanently has already been funded, and is therefore not included in the scope of these commitments.

The allocation to EDF's dedicated assets for 2008 was €1,785 million (see note 32.4 to the consolidated financial statements for the year ended December 31, 2008). On September 5, 2005, the Board of Directors of EDF had decided to allocate €2.35 billion (2005 euros) for each year from 2007 to 2010. Taking into account the new perimeter defined by the regulatory texts, published in 2007, in application of the Law of June 28, 2006 have increased the amount of the tax base of €0.9 billion, the annual portfolio of dedicated assets to the period 2008-2010 was reviewed in May 2008 to €2.78 billion (in 2008 euros). Taking market conditions into account, the allocation to dedicated assets was suspended from September 2008. Allocation will be taken again as soon as market conditions have stabilized. They will be adjusted to meet the regulatory constraint to cover liabilities by the portfolio at at the end of June 2011 at the latest.

#### **6.2.1.1.4** HYDROPOWER GENERATION

Electricity generated by EDF from its hydropower plants represented 9.4% of its total electricity production in 2008.

#### 6.2.1.1.4.1 EDF'S FLEET OF HYDROPOWER GENERATION FACILITIES

EDF's fleet of hydropower facilities in mainland France comprises 447 power plants.

- approximately 10% of the power plants have a unitary capacity that exceeds 100 MW; they represent approximately 50% of total output;
- approximately 50% of the power plants have a unitary capacity that is below 12 MW; they represent approximately 10% of total output.

The fleet's average age is approximately 50 years and 25% of the installations are over 75 years.

The power plants are mainly located in mountainous areas in the Pyrénées, the Alps, the Massif central and the Jura, as well as on the Rhine. In total, they represent an installed capacity of approximately 20 GW (excluding overseas departments and Corsica), or 20% of EDF's fleet, for annual generation capability (i.e. for an average hydraulicity) energy of approximately 45 TWh, which makes France the leading generator of renewable electricity in the European Union.

The various hydropower infrastructures were designed to optimize the uses of water resources in the valleys. As a result of the size and variety of its fleet, EDF has systems that are capable of responding to all types of demand, whether base load or peak, and that offer optimization leverages through their flexibility of use:

- "run-of-river" facilities like those on the Rhine do not have storage capabilities and produce energy depending on the supply of water available at any given time. They represent a total capacity of 3.7 GW and a generation capability of 17.2 TWh;
- EDF has one tidal power plant on the Rance: it uses the rising and falling movement of the tide to create the vertical drop that is essential to the generation of energy, and which produces electricity in a very reliable manner. This station has a total capacity of 240 MW and a generation capability of 500 GWh;
- pondage power stations are associated with small reservoirs along a river, and are used according to a schedule during the week or during the day, to cover peaks in demand. They have a total capacity of 3.3 GW and a generation capability of 10.1 TWh.

- the pumped storage power plants comprise an upstream reservoir and a downstream reservoir. During periods of low demand, water is pumped up from the downstream reservoir to create a water storage, which will be used to generate electricity during peak load periods (the water is then "turbined" from the upstream reservoir to the downstream reservoir). They represent a total capacity of 4,200 MW, which over the past few years have enabled the pumping of approximately 7 TWh and the turbining of approximately 5 TWh, as well as an average output of 1.4 TWh, by means of natural water supplies in the upstream reservoir of certain pumped storage power plants.
- the "reservoir" facilities located in the mountainous regions (Alps, Massif Central and Pyrénées) represent a total capacity of 8.8 GW and a generation capability of 16.0 TWh. They are used for their large storage capacity from season to season. Depending on demand, they can also take advantage of favorable periods to fill their reservoirs in order to be available during periods of high consumption or in order to ensure balance in the electrical system. In order to ensure the balance and optimization of its upstream/downstream asset portfolio in France, EDF, through their storage capacity, therefore holds an optional share in over thirty significant "reservoir" installations.

#### 6.2.1.1.4.2 HYDROPOWER SAFETY

Hydropower safety includes all the measures taken at the time of the design and management of hydroelectric schedules and its purpose is to manage risks that the presence or operation of hydropower facilities may create for people, property and the environment (see section 4.1.2.2 ("Management of hydropower safety risk")). It involves three main activities:

- the management of variations in levels or flows on the downstream of sites;
- operations during flood periods, in order to ensure safety with respect to facilities and inhabitants; and
- the prevention of a major risk, such as the rupture of an hydropower site, by means of monitoring and maintenance of existing structures under the control of public authorities, namely the Regional Divisions for Industry, Research and the Environment (Directions Régionales de l'Industrie, de la Recherche et de l'Environnement, or DRIRE). Among the most important dams, 68 are being subject to a specific administrative procedure (Plan Particulier d'Intervention) implemented by the relevant prefect.

EDF carries out regular monitoring and maintenance of its dams, namely by their constant testing. Real-time analysis and reports for each site of several parameters (settlement, pressure and outflow measures associated with a visual inspection of concrete or the control of the mechanical parties) enable EDF to regularly prepare reports on the condition of its dams. In Grenoble and Toulouse, thanks to a series of sensors, EDF's teams can analyze the most important or the least attainable dams remotely and, if necessary, in real time.

Finally, a complete check-up of each of the 150 most important dams is carried out every ten years, as well as a drain down or a structure inspection through sub-aquatic equipment. These monitoring operations are carried out under the control of State's services (DRIRE and the STEEG - Electric Power and Important Dams Technical Service (Service Technique de l'Energie Electrique et des Grands Barrages), both reporting to the Economy, Industry and Employment Ministry). In 2008, EDF carried out 14 of these 10-year visits at its sites.

Hydropower safety is an absolute priority for hydropower generation, and has been the catalyst for the substantial development in operating practices and policies adopted over the last few years. It is a determining factor in influencing decisions relating to the maintenance of EDF's assets.

#### 6.2.1.1.4.3 Performance of the fleet of generation facilities

#### **Highly-automated facilities**

In order to take advantage of the flexibility of its hydropower generation facilities, for some years now, EDF has been initiating ambitious programs involving automation, remote control of hydropower plants and centralized management of the valleys. Currently, the 100 largest plants in EDF's hydropower fleet (14,000 MW), representing more than 75% of its installed hydropower capacity, are remote-controlled from four control centres capable of changing their operating program at any moment in order to respond to the needs of the electric system and economic opportunities arising on the electricity market.

#### The fleet's technical performance

2008 had a normal level of hydraulicity. The production of electricity from hydropower sources (not taking into account a deduction of the 6.5 TWh of electricity consumption necessary for the functioning of the pumped storage power plants) has been of 44.8 TWh. Hydropower generation varies from year to year depending on fluctuations in water resources.

The overall availability of the hydropower fleet, i.e., the percentage of time over the year during which the power plant is available at full power, was approximately 92% on average, over the last few years.

In 2008, this availability was 89% due to programmed maintenance work, carried out in order to improve the long-term functioning of the fleet and more extensive than in preceding years. For 2008, the unavailability of EDF's hydropower fleet is due to facility maintenance (9% to 10%) and unplanned unavailability due to the extension of maintenance works and contingencies (1% to 2%).

The demand response rate, i.e., the rate of success in responding to startup orders received by the power plants, has been over 99% for several years in a context of an increasing number of orders for hydropower generation sites.

Continuing the procedure initiated in 2005 for identifying risks of faults by kind of material and in a context marked by some instances of default leading to the medium-term unavailability of installations (Tuilières dam in Dordogne, etc.), EDF decided, in 2006, to implement a program to upgrade the technical standard and reinforce maintenance of works for a global amount of €560 million over the 2007-2011 period in order to renovate certain installations, to maintain a lasting high level of hydropower safety, and to preserve the long-term technical performances of its fleet.

This 5-year renovation program for hydropower facilities, called Hydropower Safety and Performance (SuperHydro), will entail longer programmed outages than those recorded in recent years while the work is under way.

The program was started in 2007 and is proceeding as planned. The priority is to restart facilities that are currently shutdown (Tuilières and Pragnères) and improve the fleet's performance. The work completed in 2007 and 2008 has not affected the fleet's demand response rate.

After the SuperHydro program is complete, EDF intends to achieve an availability rate of more than 92%.

#### 6.2.1.1.4.4 CURRENT AND FUTURE HYDROPOWER GENERATION ISSUES

The hydropower fleet faces the following issues:

#### **Concessions renewal**

Hydropower generation facilities are operated through:

• concessions granted by the French Prime Minister for facilities exceeding 100 MW, or by the prefect, for facilities whose capacity is between 4.5 MW and 100 MW; and

• permits granted by the prefecture for facilities of less than 4.5 MW.

EDF currently holds the majority of the hydroelectric concessions in France.

The concessions had an initial term of 75 years, pursuant to the French Law of October 16, 1919, with respect to hydropower, and are in general renewed for terms of 30 to 50 years. The renewal of these concessions provides an opportunity to update the specifications in response to new requirements for water resource management and the most recent specifications set forth in the appendix to decree 99-872 dated October 11, 1999, modified by decree 2008-1009 dated September 26, 2008.

Because of its status as a French Société Anonyme, and pursuant to the Sapin law (1993) (see section 6.5.4.3 ("Regulations applicable to other generation methods used by the EDF group")), EDF is now subject to open competition for the renewal of its hydropower concessions. EDF believes that this new regulatory framework should not have significant conseguences in the short- or medium-term. Only 11% of the company's total installed hydropower capacity in France (slightly over 5% of EDF's total hydraulic generation) is covered by concession contracts that will expire before 2015. An additional 2.5% of EDF's total hydraulic power in France will expire by 2020. The renewal process is already underway for some of these contracts.

Under current regulations, if a concession is not renewed, the former concession holder does not receive any compensation. Upon expiry of the concession, all of the facilities belonging to the French State (installations from the dam to the turbine) must be in good condition. The amended finance act for 2006 provides for the reimbursement of unamortized expenses related to modernization works or works allowing for the expansion of generation capacity. The amended finance act for 2006 also provides for, concerning hydropower concessions, at the time of the renewal, the establishment of annual payments limited to 25% of the revenue of the electricity sale originating from the operation of granted hydropower generation facilities, paid to the State and partly assigned to departments.

Decree n° 2008-1009 dated September 26, 2008 sets the rules and procedures for a hydropower concession request in a competitive market. It determines 3 criteria for the choice of the future concessionary: guarantee of the energy efficiency of the operation of the waterfall; respect of a balanced management of water resources; best economic and financial conditions for the licensor or the conceding authority. The new procedure for the designation of a concessionary will now have a duration of 5 years (compared with 11 years currently).

In 2007, EDF did not obtain the renewal of a 12 MW nominal power concession concerning three plants on the Séveraisse River in the Alps.

EDF will seek to obtain the renewal of the concessions, which constitute a stake for the balance of its fleet of generation facilities.

#### Managing access to water

The 220 dams operated by EDF in France enable the storage of 7.5 billion cubic meter of water, i.e., 75% of national surface storage reserves.

The hydropower installations have positive effects on both economic development and the environment. EDF has a proactive management policy in relation to its hydropower resource, which it enforces in cooperation with various stakeholders. EDF has entered into agreements with local elected officials, farmers, fishermen, managers of tourist sites and manufacturers.

EDF gives preference to consultation with local users. This process aims first at measuring the real effects of hydropower operations on the environment and on other uses, before attempting to minimize these effects when technically possible and financially reasonable.

As a result, 700 million cubic meters of water are released each year from the dams for use other than the generation of electricity (supplies of drinking water, to supplement periods of low flow, irrigation, production of artificial snow, water sports, etc.).

The law on water and aquatic environments of December 30, 2006, contains provisions relating to the management of water resources (in particular, the value of reserved flows and the flexibility of hydropower plant operations). EDF estimates that these provisions will have medium-term consequences for its hydropower activities (see section 6.5, ("Legislative and regulatory environment")).

#### Development

95% of France's hydropower capacity is currently being operated.

EDF is nevertheless continuing the development of its hydropower activities, through the study and realization of new projects. The largest concerns the fitting-out of the Gavet. This involves replacing six hydropower plants at the end of their life cycle installed on the Romanche, with a single plant, the Gavet power plant, with a capacity of approximately 90 MW and output of approximately 540 GWh. It is expected to be put into service in 2013.

- on the Rhine, EDF has announced a €225 million hydropower energy development plan for a total capacity of 130 MW:
- in 2008, EDF put the hydropower microplant at Brisach into service, with a capacity of 2.7 MW for a productible of 20 GWh/year. a similar project is being studied close to the Kembs dam;
- the Gambsheim hydropower plant will be reinforced by the installation of an additional 28 MW group. This project will be realized in collaboration with EnBW, and construction is expected to start in 2010. A similar operation has been decided on the Iffezhein dam, on the German bank of the Rhine, for an additional group with a capacity of 38 MW to be put into service in 2011;
- the Gambsheim and Brisach projects are being implemented by CERGA, a company jointly and equally owned by EDF and EnBW;
- in the Vosges mountains, the old hydropower station for the transfer of energy by pumping the Lac Noir should be replaced in 2013 by a modern plant with a capacity of 55 MW;
- measures for the preservation of water resources and biodiversity will be implemented, notably with the realization of fish passes at Strasbourg and Kembs.
- a hydropower farm demonstrator on the Paimpol-Bréhat site in the *Côtes* d'Armor will be put into service by 2011. The aim of this 2 to 4 MW project is to test the principle of energy production from tidal currents, in real conditions.
- generation from reserved flows will continue to be developed. The purpose is to equip a certain number of dams in order to process the reserve flow through the turbines and recover a portion of the associated energy. EDF completed one project in 2007; in 2008, 4 projects were at the stage of completion. EDF plans to continue at a rate of approximately five projects per year.
- development of small hydropower plants (with less than 12 MW capacity). For example, Shema, a fully-owned EDF subsidiary, is studying five projects related to new facilities which should be built by 2012, representing a total capacity of 26 MW.

<sup>1</sup> Minimum flow maintained downstream of dams to preserve aquatic life.

In addition, EDF aims to explore all available opportunities for expansion, including:

- technical and financial studies for pumped storage plants in France;
- a study of the possibilities for extra capacity building (e.g., increasing the power of existing hydropower plants) also permitted by the French Law 2005-781 passed on July 13, 2005, which outlines energy policy guidelines (called the LPOPE; see section 6.5.2.2. ("French Legislation")), so as to help develop state-of-the-art processes; and
- upgrading existing facilities (modernization, more efficient generation, etc.) within the frame of concession renewals.

These hydropower development projects by the EDF group are fully consistent with the policies of the "Grenelle de l'environnement".

#### 6.2.1.1.5 FOSSIL-FIRED GENERATION (THF)

EDF's electricity production from its fossil-fired power plants in continental France represented approximately 3.3% of its total electricity production in 2008. This fleet, the average age of which is approximately 30 years, had in 2008 a total installed functioning capacity of 11,832 MW for a total installed capacity of 13,407 MW. Fossil-fired generation means have a certain number of advantages:

- a high degree of reactivity and flexibility (quick start-up and power modulation).
- the ability to be shutdown for extended periods (stand-by), or by contrast to be brought back into operation within short periods of time; and
- investment costs which are lower than for nuclear or hydropower facilities, and short construction periods.

In addition, the more modern fossil-fired power plants offer a better control of different sorts of emissions (carbon dioxide, sulfur dioxide, nitrogen oxide and dust).

Fossil-fired generation means are one of the essential components of the energy mix to ensure the balance of production-consumption in real time and to accommodate the variations in electricity consumption. Together with some hydropower facilities (lakes, pumped storage plants), the fossil fired generation means are used to cover mid-merit and peak demand electricity requirements.

For this reason, they play an important role in adjusting EDF's generation capacities in response to the changes of its customers' consumption (or demand).

The performance of these types of plants is nevertheless sensitive to various factors that can lead to higher generation costs:

- the tightening of environmental protection regulations (pollutant emissions, air quality);
- compliance with greenhouse gas emission quotas; and
- increases in the cost of fuel.

#### 6.2.1.1.5.1 EDF'S FLEET OF FOSSIL-FIRED GENERATION FACILITIES

#### Breakdown of the facilities

As of December 31, 2008, the fossil-fired generation facilities operated by EDF are of different types, both in terms of fuel and power:

- coal-fired units
  - 9 units with an installed capacity of 250 MW, put into service between 1966 and 1971 (Blénod 2, 3 and 4, Bouchain 1, Le Havre 1, La Maxe 1 and 2 and Vitry 3 and 4);
  - 1 unit with an installed capacity of 585 MW, Le Havre 2, put into service in 1969<sup>.</sup>
  - 3 more recent units (known as Q600), with a unitary installed capacity of 580 MW, put into service between 1983 and 1984 (Cordemais 4 and 5, Le Havre 4).

- oil-fired units
- 3 units with a unitary installed capacity of 250 MW, commissioned between 1971 and 1973 (Martigues 1, 2 and 3);
- 4 units with a unitary installed capacity of 585 MW, known as 600 MW oil-fired units, put into service between 1968 and 1975 (Porcheville 2, 3, 4, and Porcheville 1, put back into service in 2008);
- 4 units with a unitary installed capacity of 685 MW, known as 700 MW oil-fired units, put into service in 1976 and 1977 (Aramon 2, Cordemais 2 and 3, and Aramon 1, put back into service in 2008).
- iron and steel gas units (blast-furnace gas): 2 units commissioned in 1959 and 1961, Richemont 3 and 5, with an installed capacity of 50 and 117 MW respectively.
- combustion Turbines (CTs): 10 units with a total installed capacity of 1,260 MW on 5 sites (Arrighi, Brennilis, Dirinon, Gennevilliers and Vaires-sur-Marne), put into service since 1980 (including 2 units put into service in November 2008 at the Vaires-sur-Marne site, which constitute resources for extreme peak periods and which are extremely responsive. These CTs are powered by domestic oil.

The installed capacity of the operating fleet is 11,832 MW.

Furthermore, 4 units with a total capacity of 1,575 MW remain mothballed. Therefore the total installed capacity is 13,407 MW.

#### Fossil fuel supplies

Fuel supplies are managed by EDF Trading, an EDF subsidiary responsible for fossil-fuel trading. Fuel consumption is determined for EDF's fossil-fired generation facilities on the basis of expected demand, and EDF places its orders to EDF Trading for delivery two months in advance for coal and one month in advance for oil (see section 6.2.1.3.3 ("EDF Trading")).

EDF has the opportunity to adjust its requirements and inventories by asking EDF Trading to make additional purchases or, under exceptional circumstances, to sell quantities that are considered surplus. In addition, for security reasons relating to supplying the power plants, EDF Trading has been asked to maintain a security inventory on behalf of EDF divided among various harbors.

#### 6.2.1.1.5.2 CHALLENGES RELATING TO GENERATION BY FOSSIL-FIRED FACILITIES

#### RENOVATION OF THE MOST RECENT COAL-FIRED PRODUCTION MEANS TO MEET MID-MERIT LOAD CAPACITY DEMAND

For mid-merit load capacity, maintaining the most recent (i.e. most efficient) coal-fired units is the best solution to ensure availability of competitive capacities. EDF has therefore implemented in the last couple of years a program running until 2009 for the renovation and ensured reliability of its most recent 250 MW and 600 MW coal-fired power stations.

The most recent 600 MW coal-fired units benefit from the lowest fuel generation costs of all of the fossil-fired generation facilities (better efficiency, seaside units, large capacity sites). Their power, along with the flexibility of their generation, are essential advantages. They are equipped with a gas flow desulfuration system (90% reduction in sulfur dioxide emissions) and a smoke denitrification system (80% reduction in nitrogen oxide emissions) for which construction finished in mid-2008. These treatments enable these units to comply with environmental regulations effective since 2008, and to respond to the tightening of regulations expected after 2015.

Finally, EDF foresaw that its 250 MW coal units will be stopped by December 31, 2015, due to environmental regulations.

#### STRENGTHENING THE FLEET TO MEET PEAK DEMAND, AND PREPARING FOR THE FUTURE OF FOSSIL-FIRED GENERATION

In order to meet the increase in peak demand over the coming years, EDF has implemented a program to increase its peak capacity. In 2005, EDF therefore decided to:

• Put back into operation four 600-700 MW oil-fired units that had been mothballed, for a total capacity of 2,540 MW.

In spite of high variable costs, this method of generation remains competitive for peak and emergency periods (i.e., under 1,500 hours per year). Finally, in the period until 2015, the applicable regulations currently allow EDF to take into account the emissions for the entire fleet, and, thereby, to benefit from efforts made in relation to the 600 MW coalfired units

Except for the site of Martigues, which is subject to a specific regulation, the oil-fired units now use fuel at "Very very low sulfur content" (oil known as "TTBTS" with 0.55% sulfur content).

- Put into service 1,058 MW of extreme peak capacity (several hundreds of hours of operation per year) via three combustion turbines.
- Convert three oil-fired units of 250 MW each at the Martigues site into two combined-cycle gas turbines of 465 MW each, and build a 440 MW combined-cycle gas turbine at the Blénod site.

These modernization projects will cut CO<sub>2</sub> and nitrogen oxide emissions and eliminate sulfur emissions.

As of December 31, 2008, the following additional generation plants are

- the four 600-700 MW oil-fired units. The last two were put back into service in September 2008 for Porcheville 1 and October 2008 for Aramon 1;
- 503 MW of combustion turbines (129 MW of installed capacity at the Arrighi site, and 374 MW of installed capacity at the Vaires-sur-Marne, composed of 2 CTs put into service in November 2008.

#### Furthermore:

- 555 MW of CT are currently under construction at Vaires-sur-Marne and Montereau. They are expected to be put into service during the winter of 2009-2010 for the first CT, and during the winter of 2010-2011 for the
- the combined-cycle gas turbines are expected to be put into service in 2011 and 2012.

Therefore EDF plans to increase its mid-merit and peak load installed capacity by a total of 4,218 MW after 2005. 3,043 MW of this is already in service. 1,175 MW of additional capacity is expected to be put into service after 2009.

For the post-2010 period, EDF is also looking into the possibility of developing new capacity for mid-merit load (combined-cycle gas turbines and coal-fired plants using state-of-the-art technology) in order to meet potential increases in mid-merit demand. For these developments, the EDF group's main advantages are that it owns the sites on which the fossil-fired power plants are located, and its industrial skills as an operator and a developer, acquired through international operations. Over the last few years, EDF has in fact been carrying out Independent Power Plant (IPP) projects abroad.

Finally, the EDF group is participating in post-combustion and oxycombustion harnessing projects with industrial partners, concerning CCS technology (Carbon Dioxide Capture and Storage), and studies concerning the transmission and storage of CO<sub>2</sub>.

#### Evolution of the environmental regulatory framework

Fossil-fired power plants are operated within the context of regulations that apply to installations classified for environmental protection purposes, as well as regulations relating to greenhouse gas emissions (see section 6.5.4.4 ("Other regulations relating to the environment, nuclear facilities, health, hygiene and safety") for a description of these regulations) and a specific regulation regarding air quality.

The regulations relating to greenhouse gas emissions led to the establishment, in 2005, of the national CO<sub>2</sub> quota allocation plan. During the first period (2005-2007), these quotas were sufficient to operate its fossil-fired generation facilities. For the 2008-2012 period, the quota allocations for the French electric sector have decreased by 25%. For an average year operation of fossil-fired facilities, this quota allocation corresponds to a procurement need of about 2 millions of tons per year. Furthermore, the Loi des finances rectificative for 2008 provides for a maximum reduction in the quantity of quotas allocated to the electricity sector in the context of the national allocation plan of 10% in 2009, 35% in 2010 and 60% in 2012. The adaptation of its fossil-fired generation facilities, undertaken by EDF, is a result of the obligations imposed by regulations on air quality and reduction of airborne pollutants emissions, the principles of which are applicable until 2015. However, it cannot be excluded that the former regulations may be tightened for 2015 and future developments are an important challenge for EDF, in particular, with regards to the operation of its oil units beyond this date.

Owing to the shutdown of the oldest fossil-fired power plants, the renovation of the most recent plants, the set up of pollution-reducing procedures and the use of fuel with a low sulfur content, EDF considers that emissions of atmospheric pollutants from its fossil-fired fleet in mainland France will be reduced, with equivalent generation, by 30% by 2010 compared to 2005 emissions (see section 6.5 ("Legislative and regulatory environment")).

#### Generation and technical performance

Fossil-fired generation represented 15.8 TWh in 2008, decreasing by approximately 13% compared to 2007, primarily because of the introduction of a management of generation methods that integrates the constraints of the current environmental regulations. Fossil-fired generation represents 3.3% of EDF's annual generation in mainland France, and covers 21% of adjustment services.

The fossil-fired fleet's reliability has increased, with an availability coefficient of 74.4% in 2008 (71.7% in 2007), a clear improvement over four years (64% in 2004) partially due to fewer unplanned outages (accidents and prolonged shutdowns); these fell from 13.4% in 2006, to 12.0% in 2007 and 10.2% in 2008.

Minimizing unplanned outages is the essential aim for generation means such as fossil-fired facilities, operating at mid-merit and peak. The goal for these generation methods, that are called upon throughout the year on a variable basis (EDF's fossil-fired power plants operate annually between 1,500 and 6,000 hours for coal, 200 and 1,500 for oil, and several hundreds of hours for combustion turbines) is to ensure the system's security through maximum levels of reliability and availability.

#### **Industrial partnerships**

On November 30, 2007, EDF and Enel signed a Memorandum of Understanding (MOU) in order to extend their partnership in nuclear power to other generation methods. Under the terms of the MOU, Enel will help finance the erection of the three new combined-cycle gas turbines by paying an amount equal to 30% – 40% (two at Martigues and one at Blénod) and the operating expenses, and in return will be able to use some of the generated electricity. Enel must also allow EDF to take part in Enel's projects to build gas-, coal-, and brown coal-fired plants in Europe and other

Mediterranean countries. In the context of this Memorandum of Understanding, discussions are underway between EDF and ENEL.

#### **Decommissioning existing facilities**

EDF has planned all of the decommissioning operations for its existing fossil-fired generation facilities. The provisions for these operations have been made in an amount that corresponds to the cost of decommissioning all of the units being operated and the cleanup of the sites (see note 32.3 to the consolidated financial statements for the year ended December 31, 2008). However there is still a residual risk associated with increased cleanup requirements (development of applicable regulations, change in future use of the site requiring an additional cleanup process).

EDF continued throughout 2008 the decommissioning work started in 2006 on sites definitively shut down.

#### 6.2.1.2 SALES AND MARKETING

EDF's sales and marketing activities in France are managed by the EDF Customers Division, which markets EDF's energy and services to more than 26.5 million customers (excluding overseas departments (DOM) and Corsica), representing nearly 32.4 million sites (delivery points).

As of December 31, 2008, EDF's Sales and Marketing division totaled 12,057 statutory employees.

#### 6.2.1.2.1 OPENING OF THE FRENCH MARKET FOR ELECTRICITY SALES AND MARKETING

Domestic consumption in France during the 2008 financial year totaled 494.5 TWh, 1 an increase of 2.9% compared to the 2007 financial year. This increase in consumption was due to a lower average temperature in 2008 compared to 2007, and the fact that 2008 was a leap year. Adjusted for

these factors, electricity consumption in 2008 rose by 1.2% compared

In order to provide supplies for the open market, suppliers that are competing with the EDF group have access to:

- their own generation capacities;
- almost 43 TWh made available in 2008 by the EDF group through "Capacity Auctions" (VPP) described in section 6.2.1.3.4 ("Capacity auctions");
- imports;
- the wholesale electricity market.

Furthermore, the decision of the Conseil de la Concurrence on December 10, 2007, accepted and rendered mandatory the commitments proposed by EDF on making available to alternative energy suppliers a substantial volume of electricity (see section 6.2.1.3.6 ("Supplying electricity to alternative suppliers in France") below).

In 2008, EDF's electricity market share of eligible end users by volumes sold was 85.5%<sup>2</sup>, against 85.2%<sup>2</sup> in 2007.

In 2008, EDF's gas market share of eligible end customers by volumes sold was approximately 3.7%<sup>3</sup>, against approximately 3.5% in 2007.

The opening of the French market for sales and marketing of electricity occurred in the following stages:

#### % of total opening in terms of consumption

Date	Eligibility threshold	(by volume)	Total sites/eligible customers
February 1999	100 GWh/year	20%	200 sites
May 2000	16 GWh/year	30%	1,600 sites
February 2003	7 GWh/year	37%	3,200 sites and 99 LDCs
July 2004	All non-household customers	69%	2.2 million customers
July 2007	All customers	100%	27 million customers

EDF's main competitors on the French market are GDF Suez, ENDESA/SNET, Atel, HEW Energies, Poweo, Direct Energie, and local distribution companies (LDCs). With the recent completion of the merger between Suez and Gaz de France, the energy landscape has changed due to the emergence of a first-rate competitor for EDF.

### 6.2.1.2.2 PRICES AND TARIFFS

In the context of the opening energy market, the following distinctions must be made with respect to sales of electricity in France:

- tariff structures that may be applied by the historical operator to customers that have not exercised their right of eligibility;
- prices offered by various retailers to residential and non-residential customers;

• the transitory regulated tariff for market adjustment (tarif réglementé transitoire d'ajustement du marché, "TaRTAM").

Entitlement to the tariff was modified by the Law of January 21, 2008, on regulated tariffs for electricity and natural gas. The situation is now diversified, per category of customer:

- residential customers:
- who exercise their right of eligibility are again entitled to benefit from regulated tariffs (for the same residence) 6 months after such exercise, provided they submit their request before July 1, 2010 (electricity only);

1 Source: RTE-EDF Transport 2008 provisional balance sheet, including Corsica.

<sup>2</sup> Excluding DOM and Corsica; excluding network losses; including EDF own consumption.

<sup>3</sup> Source market France; data published by the DGEMP.

- who move are entitled to benefit from regulated tariffs, including when the previous occupants of the residence have exercised their right of eligibility, provided they submit the request before July 1, 2010 (electricity and gas);
- who move into a new residence are entitled to benefit from regulated tariffs, provided the residence is connected to the distribution network before July 1, 2010 (electricity and gas).
- non-residential customers signing up for a power supply equal to or less than 36 kVA:
  - who exercise their right of eligibility for a site cannot revert to regulated tariffs for this same site (electricity and gas);
- who move are entitled to benefit from regulated tariffs, including when the previous occupants of the site have exercised their right of eligibility, provided they submit the request before July 1, 2010 (electricity only);
- who move to a new site are entitled to benefit from regulated tariffs provided the site is connected to the distribution network before July 1, 2010 (electricity only).
- non-residential customers who have signed up for a power supply of more than 36kVA:
  - are not entitled to benefit from regulated tariffs except for consumption at a site where eligibility has never been claimed (neither by them nor by a previous occupant) (electricity and gas);
  - who move to a new site are entitled to benefit from regulated tariffs provided the site is connected to the distribution or transmission network before July 1, 2010 (electricity only).

On June 13, 2007, the European Commission instigated a formal investigation vis-à-vis the French State regarding presumed subsidies in the framework of French regulated electricity tariffs. The "Green" and "Yellow" tariffs applicable to large and medium sized businesses which have not exercised their rights of eligibility are targeted:

- the Yellow and Green "standard" tariffs, which are low compared with market prices, allegedly confer a benefit on a number of large and medium sized businesses. The resultant subsidy could be called into question as from July 1, 2004;
- the Yellow and Green transitory tariffs (TaRTAM) are also alleged to have constituted a subsidy from the State since their application.

The European Commission is also investigating the issue of compatibility of the TaRTAM with legislation on government subsidies and more specifically, the system for compensation of third party suppliers.

#### 6.2.1.2.2.1 THE TARIFF STRUCTURE

The tariff structure includes a range of regulated tariffs applicable to electricity sales. It applies to customers that have not exercised their right of eligibility.

The tariff structure is determined by decree rendered upon review by the French Conseil d'Etat, after consultation with the Energy Regulation Commission (Commission de Régulation de l'Énergie, "CRE") and the Competition Council (Conseil de la concurrence). Changes in the tariffs, with no changes to the structure, are determined by the Minister of the Economy, Industry and Employment and by the Minister of Ecology, Energy, Sustainable Development and Territorial Development, after consultation with the CRE.

These regulated tariffs include a fee for making the capacity available and a variable portion that is proportional to consumption, with prices that may be adjusted depending on the time of day or the season. The range of tariffs has been designed to take into account changes in customers' consumption with various options (peak hours/off-peak hours for residential customers, for example).

In addition, within the context of its mandate as an operator with public service commitments, EDF has been offering a basic necessity tariff for electricity since January 1, 2005, in accordance with Decree n° 2004-325 of April 8, 2004. Approximately 715,000 customers (including customers of the Island Energy Systems Division ) benefited from this pricing as of December 31, 2008. Finally, Decree n° 2008-778 of August 13, 2008, created a special solidarity tariff for gas carried by all suppliers and financed by a contribution that will be passed on to end users.

The tariff is a so-called "integrated" tariff because it covers all of the following elements:

- the "energy" portion, based mainly on operating costs and long-term costs (investments in generation capacity, the back-end of the cycle, research and development):
- management costs for customer service and sales, which together with the "energy" portion, form the "supply" portion of the tariff (approximately 60% of the bill, excluding taxes);
- the "network" portion including the cost of using the public transmission network operated by RTE-EDF Transport and the public distribution networks operated by distribution network operators, also called the "delivery" portion (approximately 40% of the bill, excluding taxes).

Customers benefiting from integrated tariffs receive a single electricity bill for supply and delivery, which indicates the network usage cost portion calculated on the basis of the Tariff for Using the Public Electricity Transmission and Distribution Networks (Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité, "TURPE"), established upon the proposal of the CRE (see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks" (Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité, or "TURPE" below). In this way, the separation of the generation and sales and marketing activities in a competitive market, and transmission and distribution activities, which are a monopoly, is clearly shown.

The following taxes (representing more than 20% of the bill, including taxes) are added to the electricity bill:

- local municipal and departmental taxes, collected and transferred by EDF to local authorities; the transposition of Directive 2003/96/EC of October 27, 2003, that restructured the Community's framework for taxing energy production and electricity will lead to a reform in local taxes on electricity;
- contribution to the public service charges for electricity (Contributions aux Charges de Service Public de l'Electricité, or "CSPE"), which was established by the Law of January 3, 2003 (see section 6.5.1.2 ("French legislation") below). The CSPE was set at €4.5 per MWh for 2008 with a ceiling of €500,000 per consumption site and per year; in addition the total amount due for this contribution from any industrial company consuming more than 7 GWh of electricity per annum is capped at 0.5% of its added value;

Furthermore, the CTA levy (Contribution Tarifaire Acheminement), which contributes to covering a portion of the fees for the pension system (see section 17.8.1 "Special pension system" below). On a transitional basis while waiting for the CTA of regulated tariffs to be externalized, the CTA is included in the tariff.

The Electricity Pricing Order of August 12, 2008 established a pre-tax increase in regulated electricity rates averaging 2% for Blue tariffs (i.e., an average of €0.22 per kWh, including tax), 6% for Yellow tariffs, and 8% for Green tariffs.

This tariff adjustment is in accordance with the public service contract that was signed between EDF and the French State in October 2005, which

guaranteed that until 2010 the increase in electricity sale prices for individual customers would not exceed the rate of inflation.

However, it should be noted that the regulated tariff for electricity for residential customers increased by only 2% on August 15, 2008, although the inflation rate for the 12 preceding months was 3.6%.

This adjustment applies to EDF customers who have chosen, in the context of the opening of the market, to retain the regulated tariff rate, which is among the lowest in Western Europe. The adjustment has been made in 2008 in an economic context in which EDF faced a significant increase in its purchasing costs and stepped up its investment programs.

#### 6.2.1.2.2.2 ELECTRICITY SALE PRICE TO CUSTOMERS HAVING EXERCISED THEIR RIGHT OF ELIGIBILITY

Since July 1, 2007, all customers in France are free to abandon the tariff schedule for an EDF offer or that of another supplier at any time,

With the exception of customers connected to the transmission network, who must sign different contracts for transmission and delivery, all other customers that have exercised their right of eligibility can enter into a single contract with the retailer of their choice for the transmission and delivery of their electricity. Their electricity bill will therefore consist of the following three components:

- the "electrical energy" supply price. The contract entered into with the retailer covers the billing price of activities that are open to competition, which is a market price corresponding to the costs of supplying electricity, sales and marketing, and customer care;
- the Tariffs for Using the Public Electricity Transmission and Distribution Networks (Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité, or "TURPE"); and
- public levies: the CSPE, CTA, local taxes and the VAT mentioned in section 6.2.1.2.2.1 ("The tariff structure") above.

Article 15 of the Law n° 2006-1537 of December 7, 2006, relating to the energy sector provided for the creation of a transitory tariff for market adjustment (TaRTAM) and its implementation for a period of 2 years for any customers having exercised their eligibility. Customers had until July 1, 2007, to send their written request for application of this tariff to their energy supplier(s). The Order of January 3, 2007, decided that the transitory regulated tariff for market adjustments before tax applicable to a consumer area should be equal to the regulated sales tariff before tax applicable to a consumer site having the same characteristics, marked up as:

- 10% for end users connected to low voltage with a subscribed power lower than or equal to 36 kVA;
- 20% for end users connected to low voltage with a subscribed power strictly higher than 36 kVA;
- 23% for end users connected to HTA and HTB voltage.

Law n° 2008-776 of August 4, 2008, on the modernization of the economy extends this tariff structure until June 30, 2010. Customers who currently benefit from TaRTAM will automatically be entitled to continue to benefit from it until that date. The Law also permits customers who have not already done so to request the application of TaRTAM. Finally, the Law stipulates that when customers relinquish TaRTAM, they cannot subsequently claim it again (see Chapter 12.3 ("Impact of the Transitory Regulated Tariff for Market Adjustment") of this present document). More than 2,400 customer areas, representing a total annual consumption, as estimated by the CRE at the end of December 2008, of 53 TWh (source: observatoire des marchés de l'électricité et du gaz, fourth quarter 2008), have submitted a request to EDF's Customers Division.

#### 6.2.1.2.2.3 CUSTOMER DIVISION

In 2008, electricity sales for the Customers Division to its 26.5 million customers amounted to 408.6 TWh1 (269.5 TWh to non-residential customers and 139.1 TWh to residential customers).

Since the end of 2005, EDF has offered natural gas to all of its eligible customers. In 2008, the Customers Division supplied 19.2 TWh to approximately 426,000 sites. At the end of 2008 the Customers Division supplied gas to approximately 417,900 customers including 340,000 residential ones.

The sales and marketing policy of EDF in France aims at maintaining high levels of satisfaction and strengthening relations with customers, fostering the loyalty of high-value customers<sup>2</sup> in the face of declining electricity market shares, and achieving increased sales and per customer margins. This policy is accomplished primarily by supporting customers' projects, expanding the range of gas offers, and increasing eco-efficient energy offers.

#### Maintaining high levels of customer satisfaction

Customer satisfaction is at the heart of EDF's marketing policy. Studies, both qualitative and quantitative, are carried out on a regular basis and contribute to steering this activity. A "barometer" model that measures customer satisfaction allows the company's performance to be assessed in various market segments. In 2008, EDF adjusted its mechanism for measuring customer satisfaction. The "Market Satisfaction Barometer" survey model is now consistent across customer segments. It now covers the entire range of portfolios rather than only customers connected during the year. The inconsistency between the records is thus largely attributable to this change in methodology.

In 2008, satisfaction continued at a high level in the Local Authority segment. In the Business sector, the trend of eroding satisfaction noted over recent years was stemmed and results were especially stable in the small business market (73% satisfaction rating<sup>3</sup>). For residential customers, there was a trend toward lower satisfaction. On the other hand, the level of customer satisfaction measured on the event of contact has improved. EDF's Customers Division is continuing to pursue its ambitious action plans to assure satisfaction in each customer segment.

#### **Developing of natural gas offers**

EDF's goal is to increase gas sales to valued customers through combined gas and electricity product offers.

EDF has been an active participant in the energy market for over 50 years and has been present in the natural gas market since it first opened, obtaining authorization to supply natural gas in November 2004. Its principal objective is to be responsive to customer expectations by becoming their sole supplier for both electricity and natural gas, particularly in the residential and small business markets (SMIs, SMEs).

#### **Promoting energy savings**

By expanding its traditional role in promoting efficient use of electricity to its customers, the EDF group integrated energy savings imperatives provided by the relevant regulation, in the context of the development of its marketing policy.

Thus, the Law of July 13, 2005, and associated application decrees defining the program and focuses for energy policy, set up a scheme including an energy saving certificate characterized by a national objective of energy savings (a savings target of 54 TWh Cumulative Discounted

<sup>1</sup> Data excludes internal sales, sales to foreign operators, and notifications of block trades, including Eurodif contract processing (2.7 TWh), adjusted for cut-offs (-1.4 TWh).

<sup>2</sup> Customers with a high potential of energy consumption which may be interested in related services for the control of their energy demand.

<sup>3</sup> Based on "Very satisfied" and "Fairly satisfied," source: IPSOS and LH2.NB.

(cumulée actualisée, "CUMAC") energy has been set for the period from July 1, 2006, to June 30, 2009) which binds energy suppliers to respect these commitments.

The Order of October 17, 2007, fixed a savings target at 29.8 TWh CUMAC, representing the amount of energy savings that EDF should accomplish for the period mid-2006 to mid-2009.

In order to take into account this energy savings target, in all of its markets EDF's offers include the promotion of efficient energy use and renewable energy.

In addition, to the exclusion of sale activity, EDF offers local authorities and social housing agencies:

- the Cost Amount offer (Offre montant de charges, "OMC") designed for social housing agencies. Its goal is to provide improved energy efficiency in social housing and allow EDF to earn energy savings certificates;
- the signature of agreements with local authorities which allow them to earn energy savings certificates. Some of these authorities have been granted responsibilities in the area of energy, and they coordinate specific initiatives in Energy Demand Control (EDC) and renewable energy sources. EDF acts as their partner in these initiatives.

Finally, the structure that has been created also involves major efforts to establish partnerships with businesses in the sector. With the introduction of the Bleu Ciel d'EDF brand name, EDF has completely transformed its partnership model, dropping the Vivrélec brand in January 2008. By becoming Bleu Ciel d'EDF partners, construction and renovation companies can use the Bleu Ciel d'EDF name if they commit to observe the Bleu Ciel d'EDF technical standards. In exchange for licensing the Bleu Ciel d'EDF brand name, EDF receives a fee, the amount of which varies with the size of the business partner.

Through the network of Bleu Ciel d'EDF partners, customers carrying out construction or renovation work have access to 5,000 professionals with a presence throughout the country that represent all aspects of the building trade. This network of partners contributes to the production of energy savings certificates.

#### 6.2.1.2.3 SUPPLYING ENERGY AND RELATED SERVICES

#### 6.2.1.2.3.1 Business customers

The Business Customers Division comprises more than 238,000 customers for electricity sales of 229.4 TWh<sup>2</sup> and 15.6 TWh for natural gas in the 2008

EDF assists its Business Customers in managing their energy sources, whatever their sector of activity, size, or organization. Its goal is to ensure that the energy performance of businesses contributes to their performance overall, in both financial and environmental terms.

### **Specific aspects of Large Companies and Key Accounts**

This customer segment comprises large companies the annual electricity bill of which exceeds €150,000 (excluding taxes), delivery included, as well as large groups, frequently operating on a European level and most commonly with a centralized purchasing structure. The EDF group has set up multi-country energy solutions within its coordinated marketing network which covers 11 countries (France, United Kingdom, Germany, Belgium, Spain, Italy, Austria, Slovakia, Hungary, Poland, and the Czech Republic).

The introduction of a consistent European visual identity and a specific customer charter in 2007 demonstrated the EDF group's determination to become the leading industrial partner for large European customers.

Within the Key Accounts segment, certain customers share the special feature of being large-volume consumers of electricity, i.e., customers the electricity costs of which represent a major part of their operating

On July 18, 2007, the Commission decided to initiate proceedings against EDF for abuse of its dominant market position relating to electricity supply contracts signed with large industrial customers (consumption of over 7 GWh). On December 23, 2008, EDF received notice of complaints made after the initiation of these proceedings and which pertain to two issues:

- contracts whose term is associated with a de facto or de jure exclusivity that has the effect of foreclosing the market;
- restrictions on the resale of electricity that contribute to aggravating the lack of liquidity in the French wholesale market.

EDF and Exeltium, a consortium that includes large-volume consumers of electricity, signed an industrial partnership agreement on July 31, 2008 relating to electrical energy supplies over the long term. This contract, which covers volumes in the range of 310 TWh over a 24 year period, enables EDF to optimize the operating conditions of its generating plants.

The definitive version of this contract followed an extended dialogue with the European Commission, whose comments required an adjustment to the initial agreement to ensure that it complied with the Community's competition law.

The first deliveries of electricity will take place as soon as Exeltium has the necessary financing available.

### Marketing proposals offered to Key Accounts, Large Businesses and SMEs-SMIs

EDF has developed a range of services specially adapted to its largest customers, as well as to large businesses and SMEs-SMIs:

- dedicated management systems, including: sending alerts in the event of aberrations in consumption, provision of billing data by EDI,3 electronic billing, online monitoring of cost and consumption data, and multisite billing services;
- services to assist in daily contract management as well as energy cost and consumption controls (a range of offers allowing online monitoring of the load curve and the "Excelis" products to respond to needs for higher power levels or adjustments to the transformer);
- the "Equilibre" product range whereby EDF commits to inject 1kWh produced by renewable energy sources into the network, and gives the customer the opportunity to participate in the financing of initiatives to develop renewable energies;
- the "Carbone Optimia" range that allows customers to better understand the CO<sub>2</sub> quota system so they can manage their allocations and avoid penalties;
- a new "Bas Carbone" product gives industrial and service sector companies sustainable solutions that enable them to reduce their output of greenhouse gases.

In addition, EDF has introduced specialized services exclusive to Key Accounts:

- a range of innovative and made-to-order products so that customers can select the degree of risk they wish to bear regarding energy market price
- support on a European scale through Group subsidiaries: EDF can offer customers a monthly report on all bills in all the countries where they

3 EDI: Electronic Data Interchange.

<sup>1 &</sup>quot;Related services" means services related to energy supply and not to eco-efficient energy services.

<sup>2</sup> Excluding Blue tariff sales by the Residential and Small Business Division on the behalf of customers of the Business Division.

have signed contracts with the EDF group. A dedicated website for these customers was also launched in 2008; it gives them privileged access to information on the energy market and to reports on their consumption.

Since 2005, EDF has marketed a complete range of gas supply offers for its business customers. EDF offers these customers a single contact person as well as simplified management of electricity and gas contracts. The gas offer is also strengthened by management and advisory services (internet monitoring, annual consumption summary, energy economy diagnostics, etc.).

#### **LDCs**

The Local Distribution Companies (LDCs) sell and deliver electrical energy to end users located in their exclusive area. They are responsible for 5% of the electricity distribution in France and sometimes generate electricity themselves. The Decree of January 27, 2005 relating to the tariffs for the sale of electricity to non-nationalized distributors gives the LDCs the option of obtaining special tariffs from EDF for the portion of their electricity supply sold to customers that have not exercised their right of eligibility, as well as for their network losses.

#### 6.2.1.2.3.2 LOCAL AUTHORITY AND SOCIAL HOUSING PROVIDERS

The Local Authorities Division (Division Collectivités Territoriales, "DCT") groups under the same management all commercial representatives from this segment of the market, representing more than 51,000 customers, local authorities and social housing providers.

In 2008, electricity sales by the DCT totaled 21.5 TWh.

The offers include:

- the supply of electricity and natural gas, including an "Equilibre" offer for electricity produced from renewable energy sources;
- dedicated management services, particularly the ability to monitor costs and consumption online and the sending of email alerts in the event of aberrations in consumption, electronic billing, and the remittance of billing data via EDI (Electronic Data Interchange);
- $\bullet$  diagnostics (management of energy demand, development of renewable energy).

#### 6.2.1.2.3.3 RESIDENTIAL AND SMALL BUSINESS CUSTOMERS

The 26.2 million residential and small business customers are grouped in the Residential and Small Business Customers Division. For the 2008 financial year, the volume of sales by the Division totaled 157.7 TWh of electricity and 3.6 TWh of natural gas.1

At the end of December 2008, the number of gas customers in the residential market was 340,000.

#### Offers to Small Business Customers

EDF has extended its range of offers, which combine the supply of energy and services. EDF offers EDF Pro, electricity and gas solutions that aim to simplify the lives of small business customers and a range of supplementary services with the offer Assistance Dépannage, as well as payment solutions.

Moreover, if a customer's business premises or layout changes, EDF provides advice, diagnostics, and demand-side management packages and sends the customer special newsletters to facilitate the preparation of technical specifications.

EDF also provides its small business customers with a kWh Equilibre offer, whereby, for each kWh purchased, EDF commits to generating 1 kWh from renewable sources and injecting it into the network.

1 Including Blue tariff sales managed by the Residential and Small Business Customers Division on behalf of the Business Customers Division.

EDF has provided its natural gas offer since 2005. This offer meets the very high expectations of small business customers and serves to set EDF apart from its mono-energy competitors.

#### Offers to Residential Customers

This market comprises all residential customers and is characterized by a large number of customers with a relatively low average annual electri-

The marketing policy for residential customers is focused on housing comfort, energy control, and environmental protection.

EDF has adapted its services to residential customers on the basis of two axes: the services "related to supply" and the services "related to key moments" such as mobility and thermal energy comfort, construction or improvement projects, including the maintenance of facilities. The range of usage-related packages has therefore been extended and broadened (advice, financing packages) in order to fulfill customer expectations regarding comfort (for both newly built and renovated residences), the safety of interior installations (Diagnostic Confiance Sécurité), insurance (Assurélec), project support (Objectifs Travaux), and control of consumption (Suivi conso).

Since July 1, 2007, EDF has been offering both a gas and an electricity agreement to its customers: "mon contrat gaz naturel" and "mon contrat électricité "

#### **Commercial partnerships**

During recent years, EDF has entered into a number of commercial partnerships in order to offer its Residential customers an extended degree of service

EDF has entered into two other specific partnerships, one with Cardif and the other with Crédit Foncier. The purpose of the partnership with Cardif is to create a group insurance agreement called the "Service Assurélec" that covers the payment of electricity bills in the event of the death or incapacity of the EDF customer taking out this insurance. The purpose of the partnership with Crédit Foncier is to offer residential customers a "new home environment loan" (Prêt habitat neuf) of between €2,000 and €15,500 with a fixed repayment term of 6 years. This loan is available to any residential customer undertaking a construction project that complies with the technical requirements of Bleu Ciel d'EDF. This loan represents a particularly advantageous financing solution for the installation of heating equipment.

In addition, cooperation has been implemented with Axa Assistance and Europe Assistance for repair services. The marketing of this service has been available throughout France since February 2006 for business customers and since April 2007 for residential customers.

#### 6.2.1.2.4 ECO-EFFICIENT ENERGY SOLUTIONS

EDF has set itself the goal of becoming in France the leader in eco-efficient energy to reduce its customers' energy consumption and CO<sub>2</sub> emissions. To achieve this objective, EDF is developing a range of eco-efficient energy services that will cover customer projects from a diagnostic check on their installations to maintenance and operating services and the provision of finance for energy-saving equipment, with an emphasis on maximizing the use of renewable energy sources.

#### **6.2.1.2.5** ORGANIZATION

The implementation of this strategy will be handled by two new divisions within the Customers Division:

- the Eco-Efficient Energy Services Division has the goal of developing coordinated eco-efficient energy services for all sectors. The Eco-Efficient Energy Services Division will provide direct marketing of comprehensive solutions for the renovation or modernization of the energy or heating installations of its customers throughout the Business, Local Authorities, and Residential markets; and
- the Industrial Division for the Development of Distributed Energies, whose objective is to position EDF in the development of distributed energy sources in the areas of Industrial Treatment of Urban Waste (see section 6.4.1.1.3 ("Other investments in the new energy sector")), electric transportation and vehicles, and the production of distributed energy based on photovoltaic technologies, heat pumps and wood-fired systems via EDF's Energies Nouvelles Réparties (also see section 6.4.1.1.3 ("Other investments in the new energy sector")). In addition to the first partnership agreement signed with Toyota in 2007 for the development of a rechargeable hybrid car, another partnership agreement was signed with PSA in 2008 on the occasion of the Paris Motor Show.

With the help of these proposed eco-efficient solutions, customers can control energy consumption and reduce greenhouse gas emissions, thus improving energy efficiency, reducing the environmental impact of energy consumption, and supporting sustainable development.

#### 6.2.1.2.5.1 PRODUCT OFFERS

The solutions offered by the Eco-Efficient Services Division are multitechnology approaches that combine turnkey projects, long term operating/maintenance services, and financing options in partnership with financial institutions. They are implemented on customers' sites by specialized teams from EDF and its subsidiaries, known as "Service Integrators," and their partners. This initiative meets customer expectations and complements the range of products and services marketed by EDF: electricity, natural gas, and management and energy saving advisory services.

### In the Business and Local Authorities markets

In the Business and Local Authorities markets, the Service Integrator offers personalized, efficient eco-solutions for customers from all sectors of the economy (industry, private service companies, government buildings, and local authorities). The services offered are tailored to customer expectations: audits, engineering and detailed studies, equipment delivered and installed, operating services and maintenance of newly installed equipment, financing options and remote monitoring of energy efficiency, etc.

In this same market, EDF has also developed a partnership with Schneider Electric to market:

- packaged solutions that allow customers to meet increased energy needs or adapt their transformers (the "Excelis" range of products);
- energy efficiency contracts with commitments to results in the volume of energy savings achieved and the financing of all or part of the investment required out of the energy savings achieved.

On January 1, 2009, this activity was transferred to EDF Optimal Solutions, a wholly-owned EDF subsidiary.

#### In the residential market

In the residential market, the Service Integrator markets:

- total solutions for renovating a home's entire heating system, integrating the central heating system, the domestic hot water, efficient insulation and ventilation, alterations to openings as necessary (windows, doors) to install more eco-efficient equipment. Overall completion and coordination of the work are provided by partners in EDF's Bleu Ciel network;
- "Energies nouvelles réparties" offers, developed by EDF ENR, a subsidiary of the EDF group: an all-inclusive turnkey photovoltaic product (equipment,

installation, assistance with connecting and handling of administrative procedures for implementation) and high-performance heat pumps (see section 6.4.1.1.3 ("Other investments in the new energy sector") – Energies Nouvelles Réparties (EDF ENR)).

#### 6.2.1.2.5.2 SERVICE SUBSIDIARIES SUPPORTING THE DEVELOPMENT OF **ECO-EFFICIENT ENERGY**

EDF has created subsidiaries, bought companies, and acquired minority holdings in companies to support its eco-efficient energy initiative.

#### **Domofinance**

Domofinance is a company set up in 2003 and licensed as a financial company by the Comité des Etablissements de Crédit et Entreprises d'Investissement (CECEI) on September 29, 2003, pursuant to articles L. 511-9 to L. 511-14 of the Monetary and Financial Code.

EDF owns 45% of Domofinance; the remaining 55% is controlled by CETELEM (BNP Paribas group).

Domofinance meets the financing needs of EDF's residential customers who wish to integrate efficient energy solutions into their home renovation projects. In particular, it markets the EDF Bleu Ciel Renovation Loan (Prêt Rénovation Bleu Ciel d'EDF).

#### **Fahrenheit**

Fahrenheit, a wholly owned EDF subsidiary, performs maintenance work on central heating and hot water systems for residential users, offices, and rent-controlled housing managers, as well as for jointly owned properties.

This company and its subsidiaries are based in France.

#### **Bastide-Bondoux**

Bastide-Bondoux, a research firm that is a wholly owned subsidiary of EDF, is responsible for carrying out thermal analyses in accordance with current heating system regulations, as well as providing advisory and optimization services for its customers, who are private housebuilders.

#### **Everbat**

Everbat, a wholly owned subsidiary of EDF, acts as a package builder for the technical aspects (heating, cooling, hot water, photovoltaic, etc.) of public and private calls for competitive tenders from local authorities, real estate developers, social housing managers, and industrial companies.

#### Netseenergy

Netseenergy, a wholly owned subsidiary of EDF, develops and produces the Adviso range of services offering customers access to an online graph of their consumption load curves.

#### 6.2.1.3 UPSTREAM/DOWNSTREAM OPTIMIZATION - TRADING

### **6.2.1.3.1** ROLE AND ACTIVITIES OF DOAAT

The primary function of the Upstream/Downstream Optimization & Trading Division (Direction Optimisation Amont/Aval & Trading, or "DOAAT") is to ensure an equilibrium for electricity and gas between upstream resources and EDF downstream outlets in France, and to maximize the gross margin of the integrated upstream/downstream entity:

- upstream resources: fleet of generation facilities, long-term electricity and gaz supply contracts, wholesale purchasing, purchase obligations from small decentralized generators; and
- downstream resources: long-term supply contracts, sales to end users, wholesale market sales, production capacity auctions (VPP), sales to alternative suppliers in France, contractual interruptibility capacity.

Optimization consists of carrying out short and long term economic arbitrage between the various resources available to satisfy EDF's supply commitments to its customers, while controlling risks linked to uncertainties related to generation, consumption, market events, and their financial consequences.

DOAAT's objective is to secure and maximize the gross energies margin of the "generation-supply" entity by optimum use of upstream or downstream assets flexibility (management of hydropower stocks, interrupting consumption, timing shutdowns for power plant maintenance; etc.) and permanently seeking the best purchasing and sales opportunities on the wholesale markets.

The DOAAT deals with the supply in fossil-fired fuel, coal and oil, for the EDF's plants.

For the longer term, DOAAT is planning and proposing structural changes in the upstream and downstream asset portfolios, based on anticipated changes in the market and company strategy.

For transactions on the electricity wholesale markets, the DOAAT relies exclusively on EDF Trading, a wholly-owned EDF subsidiary. At the request of the DOAAT, EDF Trading performs the following for all commodities (electricity, gas, coal, oil, CO<sub>2</sub>, etc.): (i) arbitrage transactions that fall within the scope of the optimization strategies defined by the DOAAT and (ii) hedging transactions for EDF's commercial undertakings with a view to minimizing their physical and financial risks. EDF Trading also carries out its own trading activities within strictly defined risk limits.

Since September 2006, DOAAT has also ensured the balance of the upstream/downstream gas portfolio of EDF in France and Belgium for the following three years, as well as the associated transport and storage logistics from border delivery points, the Zeebrugge gas hub and Gas Exchange Points ("GEP") in France. It manages the exposure of the upstream/downstream gas portfolio to the risk of price increases and provides support for the organization of offers by EDF's marketers to its customers in France and Belgium.

The DOAAT aims to develop cooperation with the Group's other European companies. This is the objective of the professional optimization-trading division, which groups together the DOAAT, EDF Trading and the optimization-trading entities of EnBW (Germany), Edison (Italy), EDF Energy (the United Kingdom) and Everen (Poland).

In addition, the DOAAT manages EDF purchasing obligations (27 TWh in 2008) and several trading activities: the capacity auctions scheme (Virtual Power Plants, or "VPP") described in section 6.2.1.3.4 ("Capacity auctions") (43 TWh in 2008), the electricity supply to alternative suppliers in France (see section 6.2.1.3.6 ("Supplying electricity to alternative suppliers in France")) and long-term contracts with European energy providers described in section 6.2.1.3.5 ("Purchase/sale contracts for long-term electricity") (47 TWh sold and 8 TWh purchased in 2008).

The DOAAT and EDF Trading currently have approximately 1,000 employees, mainly in France and Great Britain.

#### **6.2.1.3.2** UPSTREAM/DOWNSTREAM BALANCE OPTIMIZATION **ACTIVITIES**

The DOAAT is responsible for the management of physical risks to EDF's upstream/downstream electricity and gas portfolios and their financial

The DOAAT optimizes the energies generation-supply gross margin by using the available flexibility levers of the upstream, downstream and wholesale market portfolios, and proposing developments in value and structure of these portfolios over different time periods:

#### 6.2.1.3.2.1 OPTIMIZING THE ELECTRICITY UPSTREAM/DOWNSTREAM **FOUILIBRIUM**

In the long term (5 years or more), the DOAAT contributes to the preparation of the generation investment program and, notably, the renewal of the fleet in parallel with the development of long-term downstream market opportunities.

In the medium term (5 to 3 years), the DOAAT's role is to continuously and coherently create an optimized view of the Generation-Supply portfolio and EDF's supply/demand balances, by determining the financial trajectories and the landscape of acceptable physical and financial risks. The main levers are as follows: seeking new maintenance or operating policies with a view to improving the availability or flexibility of resources and adapting the mix of facilities; segment-based market share strategies, tariff changes, scaling interruptibility and seeking new sales offers; and adapting existing long-term contracts and seeking structured contracts with suitable counterparts.

Management of the electricity supply/demand equilibrium can also be considered in the short term (3 years to 1 month) within the framework imposed by the extreme risk (volume risk) and price risks policies drafted in accordance with the directives of the Group Risk Management Division as approved by the Integration and Deregulated Operations France Chief Officer. From a physical point of view, the main risks for energy are variations in temperature, hydraulicity, availability of the generation fleet and market shares. Thus for example, a decrease in temperature of 1°C in winter leads to an increase in consumption of electricity in France up to approximately 2,100 MW (source RTE-EDF Transport) and, in two extreme years, the difference in available volumes of hydropower can reach 15 TWh. The DOAAT also manages the exposure of EDF's upstream/downstream portfolio to energy wholesale markets' prices (electricity, gas, coal and oil products) and the CO<sub>2</sub> emission rights' market's prices variations.

In order to be able to face "volume risk," the DOAAT takes each week significant power margins to reduce the likelihood of EDF being obliged to make purchases on the spot market (next-day monitoring) to satisfy its portfolio of market commitments. DOAAT also has a group of leverage actions: the programming of generation way (in particular, nuclear power) maintenance operations, stock management (fossil fuels, hydropower reserves and customer removal capacity), sales and purchases on wholesale markets. The DOAAT manages the price risk through EDF Trading, the only entity authorized to conduct economic arbitrage on wholesale markets, depending on anticipated changes in market prices.

In the short term - (weekly to daily) - the DOAAT is in charge of the "balance responsibility" in EDF's scope towards RTE-EDF Transport in mainland France, i.e., EDF undertakes to compensate RTE-EDF Transport financially in the event of a discrepancy within the scope of its equilibrium management. The optimization consists of informing RTE-EDF Transport the day before of an offer/supply balanced program for the next day which allows the reduction of the supply costs of EDF's contractual commitments. In order to ensure balance in EDF's scope, the DOAAT can benefit from the flexibility of the customer portfolio (namely, its interuptibility) or generation assets (moving shutdowns and trials, assets which can be mobilized within a few hours, such as the fossil fuel fleet, or within a few minutes, as it is the case for combustion turbines and hydropower plants), depending on their economic value and by hedging them with the "spot" sales and purchases of energy carried out by EDF Trading on the markets. Customer portfolio and generation flexibility go as far as allowing arbitrages within the same day.

The DOAAT's optimization activity becomes more visible when extreme climatic events occur, since it allows to limit their physical and financial consequences. Therefore, the net impact of July 2006 heat wave on EDF's margin was limited to €100 million, when compared to €300 million following a

similar episode on August 2003. Due to the physical and organizational closeness between the optimizer and the trader and the other actors of the upstream/downstream generation and supply chain, it has been possible to efficiently use all available leverages: postponing facilities' shutdowns to the summer period, removal of long term and large industrial customers' contracts and optimizing wholesale markets' purchases through EDF Trading.

In addition, the DOAAT analyses and evaluates the impact of regulatory and institutional developments on the physical and financial balance of the generation-supply portfolio: system for allocating capacities at the borders; reinforcement of environmental requirements.

Under the framing of the French Electricity Union (UFE), some French producers have implemented a daily information communication system concerning their facilities' generation and their availability prospects. As of November 15, 2006 this information is daily communicated on RTE-EDF Transport's website. It has been agreed on by generation professionals and it mainly concerns:

- information related to the reference fleet and to French generation, as well as a weekly information on the level of the French hydropower stock;
- information on the expected availability of short term, medium term and long term generation capacities.

In order to promote market transparency, the UFE has decided since late 2008 to expand and accelerate the publication of such data. Thus, from now on, the publication of data is held before the close of the market, a history of the filing of the basins over a 10 year-period is available for the hydraulic sector and transparency in information sources has been improved.

In addition, from the first half-year of 2009, producers of the UFE under-

- publish more comprehensive information on the unavailability of the generation fleet;
- update information on weekends.

#### 6.2.1.3.2.2 OPTIMIZING THE GAS UPSTREAM/DOWNSTREAM EQUILIBRIUM

DOAAT optimizes the upstream/downstream equilibrium of EDF in the domain of natural gas over a three year horizon and manages all corresponding gas flows.

Upstream gas comprises medium or long term gas supply contracts (gases and LNG) negotiated by the Gas Division, purchase and sales on the natural gas wholesale markets by EDF Trading, and the associated logistics: capacities for the transit and transmission of natural gas, regasification at methane terminals and storage of natural gas.

Downstream consists of the customer portfolios of EDF, EDF Belgium and since April 2008, Electricité de Strasbourg.

Optimizing means reducing the costs of procurement and the associated logistic capacities, in compliance with the risk and sales projection policy of the company. Minimizing procurement costs is achieved by arbitrage over all time periods, between recourse to the wholesale market via EDF Trading and mobilizing available portfolio flexibilities: procurement contract deliveries, use of storage capacities, supply interruptions provided for in contracts with various customers. For management of market price fluctuation risks, DOAAT decides on the necessary financial hedging, which is implemented via EDF Trading.

#### **6.2.1.3.3** EDF TRADING

Electricity and fossil-fuel trading is a key element in optimizing EDF's generation and supply activities insofar as, in the context of wholesale markets, the constraints of generators and suppliers must be accounted for jointly, and not separately.

EDF Trading is the entity in charge of trading on the wholesale markets for electricity, natural gas, fossil fuels and CO2 emission permits on behalf of EDF. In this respect, EDF Trading is also charged with the purchase and sale of transmission capacities of gas and electricity within the European networds or interconnected with France and the supply of coal and oil to EDF's power plants. In 2008, EDF Trading traded approximately 1,565 TWh of electricity, 205 Gm3 of natural gas, 530 millions tons of coal and related transmission capacities, 409 million barrels of oil (primarily by-products), and emission certificates for 388 million tonnes of CO<sub>2</sub>.

The trading activities of EDF Trading are integrated into DOAAT's optimization strategy. Thus, the Director of DOAAT is a member of the Board of Directors of EDF Trading.

EDF Trading Ltd is an English law entity, wholly-owned subsidiary of EDF, which acts on the Markets through its wholly-owned subsidiary EDF Trading Markets Ltd located in London and regulated by the British Financial Services Authority (the "Financial Services Authority").

#### 6.2.1.3.3.1 TRADING IN ELECTRICITY

EDF Trading is the exclusive interface between EDF and the electricity wholesale markets. It is therefore responsible for optimizing and carrying out daily purchases and sales and executing the futures hedging transactions on behalf of DOAAT. Since 2006, in order to facilitate these operations, EDF Trading has had a trading subsidiary in France which is responsible in particular of daily and sub-daily trading activities on the electricity markets, particularly in France and Germany. The entity acts under the control of EDF Trading and integrates all management processes and risk control of EDF Trading.

EDF Trading is now known as one of the most important and high-performing traders in continental Europe and the United Kingdom. Since the end of 2007, EDF Trading is also active on the wholesale electricity market in Poland.

The majority of EDF Trading's electricity-related activities is based on bilateral over-the-counter transactions. The proportion of transactions carried out using financial instruments, for which delivery and settlement take place for cash only, has increased gradually and consistently over recent years, due to the wish of newcomers to reduce their exposure to physical and credit risks. Nevertheless, this development remains limited, in as much as market operators create, use and sell underlying products, and frequently require the products to be physically delivered.

### 6.2.1.3.3.2 TRADING IN CO<sub>2</sub>

EDF Trading has a significant role on the European market for CO<sub>2</sub> emissions permits. EDF Trading is in addition the exclusive interface for EDF and EDF Energy with the wholesales market for their hedging operations. EDF Trading is also active on the market of clean development mechanisms. This program defined by the Kyoto protocol allows the acquisition of emission credits generated by reduction of green house gas emission projects in emerging countries (China, India, Brazil). In 2006, EDF Trading has also been entrusted with the management of the Carbon Fund Group set up by EDF and associating the main companies of the EDF group (EDF Energy, EnBW and Edison). By mutualising of the Group's capacities regarding the purchase of emission credits, this fund has a purchase capacity of approximately €300 million and places it as one of the principal actors on the clean development market. With the creation of this fund, the different companies of the EDF group consolidate their hedging strategy by diversifying their resources CO<sub>2</sub> in emission allowances.

EDF Trading was rewarded for its activities in the CO<sub>2</sub> and emission credit markets by winning the first prize in the 2007 Energy Business Award in the emission permits markets category.

#### 6.2.1.3.3.3 TRADING IN GAS

EDF Trading is one of the main traders on the European gas markets and operates in the United Kingdom, Belgium, The Netherlands, Germany and France. EDF Trading is involved at every step in the supply chain, from the purchase of the product directly from offshore platforms through to the supply of the product to its counterparties of the wholesale market. It is also involved with transmission and storage. EDF Trading's gas activities are based on a large number of structured transactions.

EDF Trading has exclusive responsibility for the interface between EDF and the gas wholesale market. It optimizes and implements daily buying and selling transactions and conducts long term hedging operations on behalf of DOAAT.

EDF Trading has since 2006 also been active on the liquefied natural gas market (LNG). In June 2007, EDF Trading signed a contract with Ras Laffan Liquefied Natural Gas Company Limited (II) (RasGas), a Qatar gas company (see section 6.4.2 "Gas Activities").

On June 5, 2008, EDF Trading signed an agreement with The Dow Chemical Company (Dow) to share liquefied natural gas (LNG) regasification capacity. Under the agreement, EDF Trading will provide Dow with access to European LNG regasification terminals. In return, Dow will provide EDF Trading with access to its regasification capacity at the Freeport LNG terminal in Texas (see also section 6.1.1.3 ("Gas")) on the acquisition of gas fields in the North Sea from ATP Oil & Gas).

#### 6.2.1.3.3.4 TRADING IN COAL AND IN COAL FREIGHT

EDF has entrusted EDF Trading with the exclusive responsibility for supplying its fossil-fired power plants with coal. EDF Trading is also responsible for supplying the EDF Energy's thermal power stations with the international coal purchases. EDF Trading is one of the major operators on the physical and financial markets for coal and for the corresponding freight. EDF Trading purchases coal from the main generation sites in the world, including South Africa, Australia, Colombia, Indonesia and Poland, and is one of the main coal importers in Europe. EDF Trading has entered into long-term purchase contracts in the Pacific and Atlantic basins and has specialized teams who are highly experienced in maritime and land logistics.

In July 2007, EDF Trading acquired the company Amstuw BV, which manages three coal terminals with a total capacity of 15 million tonnes per annum in the port of Amsterdam.

EDF Trading has created at the end of 2007 a joint venture in partnership with Chubu Electric Power Company on supplying and trading coal in Japan.

EDF Trading acquired on December 9, 2008 from Whitehaven Coal Limited a 7.5% stake in the entity Narrabri Coal Joint Venture exploiting the Narrabri coal mine in Australia. This investment included a coal off-take contract of 20 years providing EDF Trading with a secure long term supply of high quality Australian thermal coal. The Narrabri Coal Project is located 25km south of the township of Narrabri. The coal production is expected to start in the first half of 2009.

### 6.2.1.3.3.5 TRADING IN OIL

In view of the fact that the price of gas contracts is indexed to oil product prices, EDF Trading takes financial positions on the oil market. Trading activities in this area consist mainly of executing hedging transactions on the gas contracts portfolio and developing trading around these positions, based on arbitrage opportunities arising on the markets, always strictly within the risk limits set by the Board of Directors.

#### 6.2.1.3.3.6 BIOMASS TRADING

In July 2007, EDF Trading acquired the company Renewable Fuel Supply Limited (RFSL). RFSL supplies biomass, the associated logistics, and technical support services for electricity generators wishing to use a dual fuel supply (biomass and coal) for their coal-fired power stations.

#### 6.2.1.3.3.7 DEVELOPMENT OF EDF TRADING ACTIVITIES OVERSEAS

On October 30, 2008, EDF Trading Limited acquired Eagle Energy Partners I, L.P. ("Eagle") from Lehman Brothers. Eagle is a North American entity which operates in the optimization and in the electricity and gas trading in the U.S. Eagle main activities include:

- providing optimization of electricity production means and matching customer supply and demand;
- providing optimization of gas storage and transportation of assets;
- · providing financial hedging linked with energy prices.

Eagle has a hundred associates and is a well established North American wholesale gas and electricity business. From now on Eagle will be EDF Trading's platform for its activities in North America.

#### 6.2.1.3.4 CAPACITY AUCTIONS

The DOAAT manages the capacity auctions mechanism ("VPP"). Capacity auctions result from a commitment made by EDF to the European Commission in the context of EDF's acquisition of EnBW shares. Since 2001, EDF has therefore committed to making part of its generation capacities available to the market for an estimated initial period of 5 years which means in principle until February 7, 2006. This commitment was taken at the beginning of 2001 to facilitate access of competitors to the

In 2008, almost 43 TWh (for 40 TWh in 2007) was made available to the market.

Since February 2006, EDF has had the possibility to file a motivated request to remove itself from the auction process. As of today, EDF decided to not make this choice. In September 2006, after discussions based on proposals made by EDF, the European Commission authorized a certain number of changes to the auction process, notably the introduction of a basic product for a four year period, on sale since September 2006, without any changes to the annual volume of energy made available by EDF.

Auctions therefore still continue every quarter. If the termination of auctions is planned, EDF would be in favor of a progressive exit, to avoid too much disturbance in the market.

#### 6.2.1.3.5 PURCHASE/SALES CONTRACTS FOR WHOLESALE **ELECTRICITY**

EDF has trade relationships with European operators, such as GDF-Suez, Enel, EnBW, NOK, EGL, Atel, Poweo, Direct Energie and SNET-EON, through numerous energy purchase or sales contracts.

In 2008, the volumes sold and purchased represented 47 TWh and 8 TWh, respectively.

There are several types of contracts, relating to:

- rights to energy generated by generation plants, mostly nuclear, in which the contracting parties have a stake as long as the installation is in operation (see section 6.2.1.1.3.1 ("EDF's nuclear fleet") above);
- drawing rights for electrical power, totally or partially guaranteed for a period lasting generally from 15 to 25 years;

• rights and obligations contracted for with formerly related generators (mainly the SNET, which became independent of EDF when markets opened).

The portfolio of contracts is representative of the structure of EDF's generation facilities, mainly comprised of nuclear plants. EDF sells energy at basic load and purchases it at mid-merit or peak load.

#### **6.2.1.3.6 SUPPLYING ELECTRICITY TO ALTERNATIVE** SUPPLIERS IN FRANCE

By its decision of December 10, 2007, the Competition Council accepted and made mandatory the commitment proposed by EDF on making available to alternative suppliers a substantial capacity of electricity of 1,500 MW base load, i.e., a volume of approximately 10 TWh/annum over periods going until fifteen years, at price levels allowing competition with EDF offers on the free mass market.

For an initial five year period from 2008 to 2012, the price in current euros fixed at €36.8/MWh for 2008, will increase progressively to reach €47.2/MWh in 2012.

These volumes will be allocated during three successive invitation to tender in 2008 and 2009 open to all alternative electricity suppliers in France. The awards will be at prices the purchasers are willing to pay to benefit from the electricity offered for the second ten year period. The minimum capacity accessible to each purchaser is 1 MW. The first award was on March 12, 2008. 12 companies have participated to this award which had allowed 5 companies to purchase the 500 MW proposed by EDF. The second award was organized on November 19, 2008 and enabled 5 companies over 10 participants to acquire the 500 MW proposed by EDF. The last invitation to tender will be organized during the second semester of 2009.

### 6.2.2 Regulated activities in France

In France, EDF's regulated operations consist of the following:

- transmission, handled by RTE-EDF Transport;
- distribution, handled by ERDF and the joint operator with GDF Suez;
- EDF activities in Island Energy Systems (Corsica, French overseas departments and Saint-Pierre-et-Miquelon), which are managed by the Island Energy Systems Division (Systèmes Energétiques Insulaires, or "SEI").

The tariffs for these regulated operations are established on the basis of the Tariffs for Using the Public Electricity Transmission and Distribution Networks (Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité, or "TURPE") and on the basis of compensating the additional generation costs in zones that are not interconnected with the network in metropolitan France (Compensation des Surcoûts de Production dans les Zones Non Interconnectées au réseau métropolitain continental, or "CSPE ZNI") (see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks ("TURPE")")).

#### 6.2.2.1 TRANSMISSION - RTE-EDF TRANSPORT

Created on July 1, 2000 and having become a subsidiary on September 1, 2005, RTE-EDF Transport is the operator of the French power transmission network, which it owns, operates, maintains and develops. With some 100,000 km of high and very high voltage circuits and 44 cross-border power lines, this network is the largest in Europe. Its geographical position places RTE-EDF Transport at the heart of the European electricity market. RTE-EDF Transport is the entity responsible for the correct operation and safety of the electricity network. It guarantees equitable access of all users of the network and, before its incorporation as a subsidiary, was to such purpose within EDF, an independent service with separate management, accounting and financial arrangements. RTE was converted into a subsidiary, RTE-EDF Transport, in 2005, and has since been a wholly-owned subsidiary of EDF, fully consolidated in the financial statements of the Group.

Reaffirming its commitment to Sustainable Development, RTE-EDF Transport attaches special attention to support in the best possible conditions the development of renewable energy in France. The development of transport and interconnections network is an essential element for the development of renewables energies, including wind energy, and their integration into the electrical system.

In 2008, RTE-EDF Transport group recorded sales of €4,221 million, EBITDA of €1,349 million and net income of €295 million. The financial liabilities amounted to €7,636 million as of December 31, 2008 (source: 2008 Consolidated financial statements of RTE-EDF Transport group).

The table below sets forth a simplified evaluation of energy flow on the RTE network over 2005 to 2008:

(TWh)	2005	2006	2007	2008*
Injections				
Generation	522.7	520.6	514.8	515.5
Withdrawals				
Energy withdrawn for pumping	6.5	7.4	7.6	6.5
Deliveries (including losses)	455.8	449.6	450.2	460.6
EXPORT BALANCE OF PHYSICAL EXCHANGES	60.4	63.6	57.0	48.3

<sup>\*</sup> Provisional figures.

In 2008, the net balance of physical exchanges of RTE-EDF Transport with countries abroad remained that of an export balance, except from time to time during the cold periods from January to April and then from October to December during which the net balance became of an import balance for a period of approximately 250 hours spread over 41 days. The Export balance falls regarding 2007, essentially by the fall of exportations on all borders expect the British border.

#### **6.2.2.1.1** RTE-EDF TRANSPORT ACTIVITIES

#### RTE-EDF Transport:

- manages power flows: RTE-EDF Transport is responsible for the supply/demand balance and makes adjustments, manages electricity flows and manages access rights to international interconnections, in collaboration with neighboring network operators. It mobilizes reserves and compensates for losses. It makes the necessary accounting adjustments and resolves imbalances;
- manages the transmission infrastructure: RTE-EDF Transport operates and maintains the public transmission network and is responsible for its development, for minimizing costs for the community and for ensuring the safety of the system, people and property; and
- guarantees access to the transmission network: it enters into contracts with transmission network users on the basis of network access tariffs and in accordance with rules of non-discrimination.

#### 6.2.2.1.1.1 POWER FLOW MANAGEMENT

#### Cost allocation

The costs corresponding to the balancing offers activated by RTE-EDF Transport as a result of negative imbalances are passed on to the balance responsible entities (generators, traders, suppliers, etc.) proportionately, based on their imbalance. In the event of positive imbalances RTE-EDF Transport financially compensates the balance responsible entities for positive imbalances.

#### Interconnections

RTE-EDF Transport manages access to international interconnections in collaboration with the transmission system operators of neighboring European countries.

The European electricity transmission networks are interconnected, and ensure that energy can be transmitted from one country to another. These interconnections are used to ensure the operating safety of the electricity transmission networks (in particular using neighboring generators and transmitters to compensate for a major generating or transmission unit outage in France and conversely) and to develop the European electricity market by enabling an electricity supplier to sell its energy to a customer in another country in the European Union. Moreover, these interconnections, by working on the basis of time differences between peak-loads on different sides of borders, enable generation capabilities to be better shared at a European level.

Concerning the project of the line between France and Spain, the summit of January 10, 2008 has lead to the signature between RTE-EDF Transport and REE (manager of the Spanish transmission network) of a memorandum intended to create a joint company responsible for developing an electrical link via the Eastern Pyrenees. The formalities for the creation of this company, called INELFE and which is responsible for carrying out the proposed new underground direct current link between France and Spain were completed in November 2008. The bylaws were signed by REE and RTE-EDF Transport.

An agreement between RTE-EDF Transport and TERNA (manager of the Italian transmission network) was signed on November 30, 2007, to foster development of the electrical connection between France and Italy. This agreement will increase the existing connection capacity by 60%. RTE-EDF Transport and TERNA undertake to improve the existing network and study the feasibility of a new electrical interconnection between the two countries.

RTE-EDF Transport and ELIA, a manager of the Belgian transmission network, and National Grid in Great Britain, launched on September 8, 2008 a consultation of the electricity market on the need to increase in the future exchange capacities between Great Britain and the rest of Europe, as well as on the proposed construction of an additional interconnection between France and Great Britain. This consultation takes place in a context where increased investment in transport networks across Europe is becoming a necessity, particularly in order to support the growth of renewables and the development of new generation plants.

On December 18, 2008, RTE-EDF Transport and ELIA created Coreso. This joint venture, which has been operational since February 16, 2009, aims at coordinating the operation of the electric power systems comprising France, Germany and the Benelux. The creation of Coreso meets the needs of strengthening operational cooperation between transmission system operators (TSOs) as expressed both by the European Commission in its draft directive, and by the actors of the electricity market. Coreso should enable a better integration at the regional level of the production of renewable energy and guarantee a secure management of border flows which are rising sharply.

National Grid, the British TSO, and Vattenfall Europe Transmission, the German TSO, have already announced they would join Coreso during 2009.

RTE-EDF Transport and National Grid decided in July 2008 to jointly engage around €70 million of investments in the electricity interconnection IFA2000 linking France to England, particularly for the replacement of the conversion equipments dating from 1986, year of commissioning the interconnection. RTE-EDF Transport and National Grid seek to increase the reliability of the existing electricity interconnection and thus improve over time availability in response to the development of European electricity market. Thus they mark their willingness to enhance the safety of electrical systems and of the smooth flow of electricity exchange between the United Kingdom and the rest of Europe.

#### Tri Lateral Market Coupling

Due to the existing limitations in cross-boarder exchange capacities, the EC regulation n° 1228/2003 sets forth new rules at European level to handle problems related to the network congestion for the allocation of interconnection capacities (see section 6.5 "Legislative and regulatory environment")). For practical purposes, there are two methods which allow to comply with this regulation:

- allocation of an interconnection capacity by open auctions: the sale of exchange programming rights;
- allocation by implicit auctions: interconnections access priority is given to the less expensive energy blocks.

In this last case, "market coupling" will be carried out. Market coupling is based on the performance of energy markets and boils down to merging purchase and sale book buildings of two nearby markets and creating a common price for such markets, within the import and export exchange capacities' limit.

The coupling of the three electric markets France-Belgium-The Netherlands, called "Tri Lateral Market Coupling" started on November 21, 2006. It was the first experience of this kind in Europe (except for Nordpool) and its success is now confirmed. After signing the "Memorandum of Understanding" in June 2007, electricity markets and managers of transmission networks in Belgium, in France, in Germany, in Luxembourg and in the Netherlands have made significant progress towards a coupling of the

electricity markets in the CWE (Central and Western Europe) region and towards a better coordination for security of supply. The result of the market coupling will allow the establishment of the most important regional electricity market in Europe. It will contribute to a reconciliation of these electric spot markets and to a more efficient use of interconnections. The market coupling will enhance competition on the prices of wholesale markets of electricity and increase the safety of power. On October 1, 2008, the 7 Transmission Network Managers concerned (RTE-EDF Transport, Elia, TenneT, Cegedel Net, and EnBW TNG, E.On Netz and RWE TSO) created a joint venture company named "CASC-CWE" (Capacity Allocation Service Company) aiming to offer a "single window" for the allocation by auction of the transmission capacities of energy transport to the borders of the CWE zone countries (France, Benelux and Germany).

#### 6.2.2.1.1.2 MANAGEMENT OF THE TRANSMISSION INFRASTRUCTURE

RTE-EDF Transport is responsible for maintaining the transmission network, through everyday maintenance, emergency repairs and the renewal of installations that are at the end of their service lives or that are damaged.

Following the storms of 1999, RTE-EDF Transport implemented a "mechanical safety program". Undertaken with numerous external subcontractors, the program's objective is to strengthen the mechanical resistance of overhead lines to enable them to withstand wind speeds of up to 150 km/hr and to transform or install approximately 16,400 "anti-cascade" towers in order to prevent a domino effect when faced with higher wind speeds. Completion of the entire network security program by 2017, as agreed with the public authorities (public service contract) in preparation for major climatic events, will require, after studying all the technical arrangements to be implemented and changes in the initial scope of the project, a gradual increase between 2008 and 2011 in financing for operating costs, which will increase from €105 million (in 2007 euros) in 2008 to €175 million (in 2007 euros) from 2011.

#### Development

RTE-EDF Transport is also developing the transmission network. The aim of the new projects is to strengthen the national network and anchor the French transmission network in the European system.

Every year, RTE-EDF Transport prepares an investment program for several years which is approved by the Energy Regulation Commission. In 2008, RTE-EDF Transport spent €834 million for the development of its network, as opposed to €773 million in 2007.

#### New investments carried out in the transmission network

• The Chaffard - Grand Ile and Marlenheim - Vigy lines

In October 2007, the new 400 kV Chaffard – Grand Ile link between Lyon and Chambéry, and the first section of the new 400 kV Marlenheim - Vigy line were brought into service on schedule. These lines will reinforce the security of the electric supply of respectively the Chambéry area and the Alsace area.

• New Post-processing on the site Biançon (Var)

A new metal-enclosed post of 400 kV on the site of Biançon (Var) was commissioned in June 2008. RTE-EDF Transport reinforces the power to the west of the Alpes-Maritimes. This is a first step in remedial action incurred after the termination of the Project Boutre-Broc-Carros.

Cotentin – Maine

The project of the 400 kV Cotentin and Maine electric line, which should be approximately 150 km long, is meant to ensure the security of the French electric system at the time of the start-up of the Flamanville 3 generation site. In April 2008, the Ministry of Energy has approved the choice of spindle with the least impact for the trail of this line. As required by the administrative procedure, this trail is subject to a thorough impact assessment subject to consultation with the mayors and the services. This will take place from April 2009, then the public inquiry should be organized in the second or third quarter of 2009.

#### A new stage in increased investment in RTE-EDF **Transport networks**

Integration of the European market, fundamental restructuring of the generation fleet, and societal changes that reinforce the constraints on integrating new infrastructure in the public interest and maintaining industrial resources to meet customer and local authority needs: these are the challenges RTE-EDF Transport must confront in its mission as manager of the electricity transmission network. To meet these demands, RTE-EDF Transport is entering a new phase in terms of investment, which has experienced substantial growth since 2004, and will increase to approximately €950 million per annum during the period 2008-2011.

#### The Energy Balance in 2008

#### INCREASE IN DOMESTIC ELECTRICITY CONSUMPTION

French domestic electricity consumption in 2008 (494.5 TWh) increased 2.9% (+14.1 TWh) in relation to 2007. Direct customers connected to the RTE-EDF Transport network, as for them, show a diminution in their rackings of 0.9% (-0.8 TWh).

The varying climatic conditions encountered in 2008 compared with 2007 resulted in an increase in consumption of 6.8 TWh in 2008 as against the previous year, the remaining growth coming from the increase in clients served by the distribution networks.

Domestic consumption corrected for climatic factors (provisional value: 486.1 TWh) increased by 1.2% (5.7 TWh) in 2008 compared with 2007<sup>1</sup>, after the correction of the leap year.

This growth was generated by greater use of electricity by customers connected to low voltage networks (residential customers, small businesses, public services, public lighting, miscellaneous tertiary) whose consumption increased by approximately 3% corrected for climatic factors and for the leap year, whereas SMEs serviced by the high voltage network recorded a stable consumption corrected for climatic factors and the effect of the leap year.

In 2008, the maximum for consumption in France was recorded December 15, with a value of 84,426 MW for an average daily temperature of + 3.9°C (1.4°C compared to the normal level). At the end of the year, the absolute maximum consumption was equal to 88,960 MW, value recorded on December 17, 2007.

The sum of cross-border commercial exchanges (exports + imports) reached 116.2 TWh in 2008 and finds back in the effect of rising imports, to a level close to that of previous years to 2007.

The difference was +5.6 TWh (+5.1%) compared with 2007.

#### 6.2.2.1.1.3 RTE-EDF TRANSPORT INTERNATIONAL ACTIVITIES

RTE International, a subsidiary of RTE-EDF Transport created in September 2006, is the RTE interface for all engineering and consultancy services outside France in response to invitations to tender or negotiations.

During 2008, twenty-one contracts were won by mutual agreement in the context of cooperation agreements or of international bids notably:

1 2007 final value: 480.4 TWh.

- establishment of an electricity market covering the six countries of the "Great Meakong" (Cambodia, Southern China, Laos, Myanmar, Thailand and Vietnam), financed by the Asian Development Bank;
- assistance GCCI (Gulf Coast Countries Interconnection Authority) for the operation and maintenance of interconnections of the six Persian Gulf countries (UAE, Saudi Arabia, Bahrain, Oman, Qatar and Kuwait).

#### 6.2.2.1.2 ORGANIZATION OF RTE-EDF TRANSPORT

#### RTE-EDF Transport is a French société anonyme with an Executive BOARD AND A SUPERVISORY BOARD

Pursuant to Law n° 2004-803 of August 9, 2004 and Decree n° 2005-1069 of August 30, 2005 which approved the RTE-EDF Transport's articles of association, the company is managed by an Executive board under the control of a Supervisory board.

RTE-EDF Transport's Supervisory board comprises twelve members, including six members appointed by the ordinary Shareholders' Meeting, four members representing employees and two members representing the French state. They are appointed for five years.

RTE-EDF Transport's Executive Board comprises a maximum of five individuals, appointed for 5 years, who carry out their responsibilities under the control of the Supervisory Board. Subject to the approval of the Minister of Energy, the Supervisory Board appoints the Chairman of the Executive Board as well as, based on the Chairman's recommendations, the other members of the Executive Board.

Pursuant to Article 14 of the French Law of February 10, 2000, the Chairman of the Executive Board submits to the CRE, on an annual basis, the investment program for the public electricity transmission network, in accordance with RTE-EDF Transport's medium-term financial plan.

In France, management of the Public Transmission Network (PTN) is performed by RTE-EDF Transport pursuant to Article 7 of the Law of 2004-803 dated August 9, 2004. Article 12-II of Law 2000-108 dated February 10, 2000 provides that the PTN manager should perform its mission under the conditions set out in model concession specifications approved by decree of the French Council of State following an opinion by the Energy Regulation Commission. The PTN concession model specifications were approved by Decree n°2006-1731 dated December 23, 2006. The amendement of the concession agreement dated November 27, 1958, given concession to RTE-EDF Transport of the PTN, was signed on October 30, 2008; it will expire on December 31, 2051. The new specifications replace those dating from 1995, which are inappropriate for the new legal framework created by directives 96/92/EC dated December 19, 1996 and 2003/54/EC dated June 26, 2003 (legal separation of accounting and management for the transmission and generation activities and the supply of electricity).

### 6.2.2.1.3 TARIFF FOR USING THE PUBLIC TRANSMISSION NETWORK

The tariff for using the public transmission network is a component of TURPE (see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks (Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité, or "TURPE")")).

### 6.2.2.2 DISTRIBUTION – ERDF (ÉLECTRICITÉ RÉSEAU **DISTRIBUTION FRANCE)**

The main purpose of distribution activities is to deliver the electricity sold by electricity suppliers to end-users. EDF contributed all its distribution operations into a wholly-owned subsidiary, ERDF, operational since January 1, 2008. ERDF serves approximately 34,000 out of some 36,500 French municipalities, or 95% of the volume of electricity distributed in France, 5% being distributed by local distribution companies.

ERDF delivers electricity to the installation terminals (meters) of network customers, where the withdrawals are made. A number of different operators inject electricity into the distribution network. The main operators are as follows:

- RTE-EDF Transport, which is responsible for energy transmission in France (see section 6.2.2.1 ("Transmission – RTE-EDF Transport")): the corresponding injections are made from the source substations spread over the network; and
- generators with installations whose size allows electricity to be injected directly into the distribution network.

These injections must compensate, at all times, for customer withdrawals and network losses. Failure to do so may result in a deterioration in the quality of the supplied product (quality of the wave, voltage and even the continuity of supply).

The electricity volumes (preliminary information) transmitted on ERDF's network in 2008 are as follows:

- injections:
  - by RTE-EDF Transport: 347.8 TWh;
  - by decentralized generators: 18.9 TWh;
- withdrawals: 346.4 TWh: and
- losses: 20.3 TWh.

The distribution network generates losses, which are in part due to physics (the Joule effect) and depend directly on the quantity of electricity transmitted. ERDF must compensate for these losses in order to supply the quantity of electricity required by the end-users. In 2008, the loss rate was 5.5% of the electricity injected into the network, i.e., 20.3 TWh. The cost to ERDF was €1,287 million in 2008. To compensate for these losses, ERDF purchases the corresponding electricity on the market by means of invitation to tender, placing approximately 20 qualified suppliers in competition.

ERDF operates through the following businesses:

- as licensee, managing the licensed assets: extension, strengthening and renewal of the network:
- operating and maintaining the network in order to ensure the continuity of service;
- carrying out the work on the network;
- ensuring access to the network to all users within the context of the applicable contractual mechanisms;
- managing the meter system, acquiring, processing and transmitting the consumption data of network users.

In 2008 ERDF distributed electricity to more than 33 million Points Of Delivery (POD) in mainland France via a network of approximately 1,280,000 km.

In 2008, ERDF published sales of 11,298 million, an EBITDA of 2,603 million and a net profit of €217 million. Financial liabilities (excluding hedging derivatives) as of December 31, 2008 amounted to €166 million. ERDF employed 36,795 people as of December 31, 2008 (source: ERDF activity report 2008).

#### INSTITUTIONAL AND LEGISLATIVE NEWS

The implementing of the provisions of the Law on Solidarity and Urban Renewal (SRU) and the Law on Town Planning and Habitat relating to trunking operations to public electricity distribution network (UH) provide for the implementation of a new device whose main characteristics are:

- definition of the trunking operations with a distinction between the extension and the connection part;
- precise identification of beneficiaries and contributors;
- establishment of a single price list for invoicing all of trunking operations;
- taking on by the delivery tariff of 40% of the trunk (reduction applicable as set by the price list).

The decree of July 17, 2008 (published in Journal Official of November 20, 2008) setting the reduction rate to 40% has enabled the implementation of laws SRU-UH. This decree came into force on January 1, 2009 and relates only to planning permissions with a filing date which is later than that date.

The price list has been proposed to the Energy Regulatory Commission (CRE) which approved it.

Contributions received pursuant to these texts will be accounted for

#### **6.2.2.2.1** DISTRIBUTION NETWORK

#### TECHNICAL CHARACTERISTICS

As of December 31, 2008, the distribution network for which EDF is the licensee (see section 6.2.2.2.3 "Concessions" below) comprises approximately:

- 599,300 km of 20,000 volt high voltage lines (HTA);
- 675,300 km of 400 volt low voltage lines (BT);
- 2,200 HTB/HTA source posts; and
- 734,000 low voltage/high voltage transformers.

Generally speaking, this network's limits are:

- upstream: the source substation owned by ERDF for the part that it operates, which forms the interface between the transmission network and the distribution network:
- in certain cases, and still upstream, the substation connecting to generation installations that are directly connected to the distribution network; and
- downstream: the meters and circuit breakers installed at the premises of the customer, which fall within the scope of the concession.

### TARGETED RECOVERY OF THE QUALITY OF SERVICES

The quality of services is a major objective of ERDF. This goal is reached by maintaining a steady tension, the closer to a value set by contract or, failing that, by regulation, and by minimizing the number of power cuts. The Decree n° 2007-1826 of December 24, 2007, some measures of which came into force on June 28, 2008, sets the thresholds of the quality of services to abide by the managers of the distribution network. Regarding the quality of the voltage, over 98% of customers are considered in 2008 as "well supplied" under existing regulations. On the other hand, an increase in the average cumulative duration of interruption of supply has been noticed, increases going from just over 60 minutes in 2004 and 2005 to 72 minutes in 2007 and 78 minutes in 2008. This trend is explained by the accumulation of recent extreme weather events (sticky snow, freezing rain, thunderstorms and violent storms in 2006 and 2007, episodes of large snowfalls early 2007 and late 2008) but also by increasing numbers of failures related to the aging network.

Against this backdrop, ERDF has proposed to the Energy Regulatory Commission (CRE) within the consultations on tariffs for use of public transportation and distribution of electricity (see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks (Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité, or "TURPE")") to initiate from 2009 onwards a long-term plan for a focused modernization and rehabilitation of the quality of services.

#### **EVOLUTION IN INVESTMENTS**

In 2008, €2,034 million were invested, €1,012 million of which were mainly allocated to the connections of new customers and producers. The new launch of investments thereby represents an increase of €297 million in investments in the distribution network between 2007 and 2008. The additional resources engaged thereby are applied to ensuring networks' security, to safety in general and to environmental protections, three fields in which customers and local authorities' expectations are particularly high. In total, between 2007 and 2008, the distributor has invested approximately €3.8 billion in distribution networks in mainland France. In addition, the conceding authorities invested approximately €1,069 million in 2008, bringing the total investment in distribution networks in mainland France in 2008 to approximately €3.1 billion. ERDF plans to spend almost €2.3 billion in 2009 in order to initiate the recovery plan for the provision of quality, reduce its network's vulnerability to weather conditions (sticking snow, storms, floods, heat waves, etc.), modernize the industrial tool and connect new users to the network.

A climate contingencies action plan was developed and implemented in 2006 in accordance with the public service agreement (see section 6.4.3.4 ("Public service in France")). This plan is based on a complete evaluation of the network's potential weaknesses in respect to climatic events, and provides, in particular, for the burying of over 30,000 km of medium-voltage lines by 2016.

In order to comply with the public service agreement's objectives as well as with environmental and aesthetic objectives, ERDF has also undertaken to bury 90% of the new high-voltage lines and to apply "discreet techniques" to two-thirds of the new low-voltage lines. ERDF does not plan to bury its entire network, as a buried network is subject to the same supply interruption risks as an overhead network: indeed, it may be subject to external shocks (heat waves, floods, works, etc.), and the time required to locate the incident and to re-establish the customer's supply may be longer than in the case of overhead networks.

In order to be able to face major incidents, ERDF created a special rapidresponse task-force (Force d'Intervention Rapide or FIRE) which allows it to focus teams from all regions in the affected area, in order to end the service interruption as quickly as possible.

#### END OF 2008 AND BEGINNING OF 2009 BAD WEATHER

Significant snowfall during the night of December 13 to 14, 2008 cut off electricity supplies for 100,000 customers in the Massif Central. ERDF has mobilized 920 officers on the ground, some of which came in support from several regions as well as 150 employees of companies. Despite the exceptional weather conditions and heavy snowfalls that have hindered access to certain network points affected by the weather, ERDF has resupplied 97% of customers in less than four days. This fully meets the commitments of the public service contract which sets a resupply of 90% of customers within 5 days in case of exceptional climatic events.

January and February 2009 have been marked by two major storms.

The storm Klaus struck on January 24, 2009 the Aguitaine, the Midi-Pyrenees and the Languedoc-Roussillon. This storm has particularly damaged of the public electricity distribution network. ERDF agents were assisted by their colleagues of the FIRE, employees of the EDF group and of specialized companies as well as reinforcements from other European countries. Mobilization of 6,600 technicians helped re-supply in four days more than 90% of the 1.7 million customers

Right out of the first storm, a second storm, named Quinten, crossed France on February 10, 2009 in the north from a line going from Arcachon to Besançon. It cut off electricity supplies for more than 900,000 homes. Through the mobilization of 4,300 ERDF agents and of specialized companies, spread across the 62 departments affected, 90% of customers without power have been re-powered in a day.

The accurate assessment of damage and costs of facilities rehabilitation in the aftermath of these storms will be conducted during the first half of 2009

#### **6.2.2.2.2 ELECTRICITY MARKET**

#### FUNCTIONING OF THE ELECTRICITY MARKET

The French market for electricity has been opened to all customers from July 1, 2007.

After a phase of definition of the rules aiming at making the market work, ERDF in 2008 focused its efforts in consultation with alternative suppliers, EDF seller, regulator (CRE), consumer associations, State and local authorities, on the continuous improvement of the processes and associated information systems. Performance indicators for ERDF agreed with the electricity suppliers. In the field of management and customer relations, they have progressed over the last 18 months.

The year 2008 was also marked by the sharp increase in the facilities trunking numbers for electricity production of connection powers of less than 36 kVA.

Following a decision made on April 7, 2008 by the Board of Settlement of Disputes and Penalties (CORDIS) of the CRE, ERDF has developed in 2008 its model of the GRD-F contract offered to suppliers. Details were provided on the responsibilities of ERDF towards the suppliers. On the other side, customers can initiate, if necessary, the contractual liability of the network distribution manager.

#### **CONNECTED METERS PROJECT**

ERDF decided in 2008 to test a new generation of connected meters. These meters let distributors act at a distance and bill customers based on a real index. This experiment opens new opportunities, such as lower costs through electronic meter-reading and maintenance, and better service to customers and suppliers through more options for consumers and more efficient network management (e.g., careful control of supply quality, improved load curve, and fewer non-technical losses). This experiment will involve 300,000 customers in Greater Lyon and in the region of Tours. It will be subject a general review from the CRE in 2010. This will allow to foresee the eventual renewal of all ERDF's 35 million meters. This vast project, if implemented, would take about 10 years and could cost some 4 to 5 billion euros.

#### **6.2.2.3** CONCESSIONS

In France, the concession-issuing authorities own distribution networks which can be qualified as "return goods" ("biens de retour"). The mission to develop and operate the public distribution networks, whose purpose is to ensure an efficient service for the national territory via the public distribution networks and connection and access, in non-discriminatory conditions, to the public distribution networks, is given by articles 2 and 18 of the Law of February 10, 2000 to ERDF and EDF in those zones that are not connected to the continental metropolitain territory, and in their exclusive service zone, to the LDCs (or ELDs ("Entreprises Locales de Distribution")) mentioned in article 23 of Law n° 46-628 of April 8, 1946.

This public service is managed in the context of concession agreements that concern not only network management, but also supply at regulated tariffs, the latter mission being given by the Law to EDF and the LDCs in their service zone.

In accordance with the provisions of article 14 of Law n° 2004-803 of August 9, 2004, modified by article 23 of Law n° 2006-1537 of December 7, 2006, the current concession contracts are deemed jointly signed by the concession-issuing authority (local government or public institution of cooperation («établissement public de coopération»), EDF (or the territorialy competent LDC) for the part concerning supply at regulated tariffs, and by ERDF (or the territorialy competent LDC) for the part concerning network. At the time of their renewal or modification, concession contracts are co-signed according to these terms.

Alongside EDF, ERDF manages approximately 1,200 concession contracts, corresponding to 94% of the electricity distributed and covering 95% of the population.

#### TERMS OF THE CONCESSION CONTRACTS

A framework concession contract and specifications was adopted (with adjustments, depending on whether the contract was entered into with an urban municipality or a syndicate of municipalities) in June 1992 following negotiations between EDF and the National Federation of Licensors and Local Utilities (Fédération Nationale des Collectivités Concédantes et Régies, or FNCCR) and were validated by public authorities. This concession was updated in July 2007 to account for new French legislation (see section 6.5.3. ("Public electricity distribution concessions")). It encourages licensors to regroup themselves at the departmental level. To date, approximately 95% of the concession contracts have been signed according to this framework.

As of December 31, 2008, the concession contracts of 168 municipalities expired and were tacitly renewed pending the conclusion of renewal negotiations. These municipalities represent less than 0.5% of the population served by ERDF.

The contract for the city of Paris, signed on July 30, 1955, and amended several times, expires on December 31, 2009. Negotiations are underway with the city of Paris with a view to signing a new contract.

The concession contract is negotiated locally on the basis of the standard framework specifications adopted in 1992, the principal terms of which concern the following points:

- the purpose and scope of the concession: the licensing authority guarantees to the licensor, concerning the network management mission, the exclusive right to exploit the public service of development and operation of the public network for the distribution of electricity in a given territory. The licensor is responsible for the operation of the service, and operates it at its own risk:
- the principles of pricing, namely equal treatment of users, economic efficiency and geographical adequacy;
- the payment by the licensor of charges to the grantor;
- the obligation for the licensor to carry out industrial and renewal provisions by taking into account the cost of works replacement which have to be renewed (Article 10). The amounts corresponding to these obligations are subject to an annual report to licensors (Article 32);
- the practical and financial terms in case of renewal, including the repayment to the grantor of any surplus of provision for renewal unused (Article 31);
- the practical and financial modalities in case of non-renewal or early termination when continued service is no longer of interest (Article 31-B), namely (i) delivery to the grantor of the works and equipment at the

concession in normal service state, (ii) the payment by the licensing authority of an allowance equal to the unamortized value of the works revaluated in the proportion of the EDF funding (these provisions are intended to allow recovery by EDF of the unamortized value of the works financed as licensor), and (iii) the payment by the concessionaire to the grantor of the balance of provisions made for the renewal of works completed with industrial depreciation made in the proportion of the participation of the licensor in the financing structures.

#### **DURATION OF THE CONCESSION CONTRACTS**

Concession contracts are generally entered into for a period of between 20 and 30 years. Weighted by consumption in kWh delivered to blue, yellow, and green tariff customers, the remaining duration of the concessions averages 15 years.

#### EXECUTION OF WORK ON THE DISTRIBUTION NETWORKS: A SHARED SKILL

Contracting work on the networks (the lead contractor coordinates, carries out, and finances the work) is divided, on the basis of the principles established in the standard specifications, as follows:

- with respect to connection (network extensions and creation of connections) and installation modifications (network improvements as a result of an increase in electricity demand or to improve service quality), ERDF and the licensor share the contracting of work for rural electrification networks on a case-by-case basis. For urban networks, ERDF is generally responsible for contracting the work;
- ERDF is the lead contractor for maintenance and renewal work (maintenance, pruning, renewal, displacement and compliance); and
- the local authorities are the exclusive lead contractors for integrating installations into the environment (burying work, improvement of aesthetics, etc.).

#### MAIN FEES AND CONTRIBUTIONS

Contracts provide for the payment of a fee that enables the licensor to fund concession-related expenditures.

ERDF pays a fee for electricity installations that occupy public property. This fee is calculated according to a formula based, in particular, on the number of people served, and was revised by an order passed in March 2002. It is paid to the licensing municipalities or licensors unions and to the department.

ERDF and non-nationalized distributors pay into a French fund for electricity depreciation and amortization expenses (Fonds d'Amortissement des Charges d'Electrification, or FACE) based on the number of kWh supplied. The FACE redistributes the collected funds to the local authorities to fund their rural electrification expenditures.

ERDF and non-nationalized distributors also pay into a French electricity rate balancing fund (Fonds de Péréquation de l'Electricité, or FPE), which splits the equalization charges among the distribution network operators. Equalization charges relate to the obligation to ensure that all customers across the domestic market benefit from the same electricity delivery tariff.

#### 6.2.2.4 ERDF ORGANIZATION

Article 15 of Directive 2003/54/CE of June 26, 2003 states that if the manager of a distribution network belongs to a vertically integrated company, its distribution operations must be legally independent from its other operations in terms of organization and decision-making.

A French Law concerning the energy sector passed on December 7, 2006, amended an earlier law passed on August 9, 2004, in order to transpose Directive 2003/54/CE related to the legal separation of distributors. EDF and Gaz de France (now GDF Suez) decided to create separate subsidiaries for their respective network operators (electricity and gas), both subsidiaries ERDF and GrDF sharing a joint service as permitted by law.

In order to implement the law passed on August 9, 2004, an agreement to transfer assets has allowed EDF to transfer to ERDF assets and liabilities of EDF related to electricity distribution activity (such as rights, authorizations, obligations, and contracts related to managing its public electricity distribution network).

ERDF is a société anonyme governed by a Management Board and Supervisory Board. The Supervisory Board has 15 members: eight appointed by an Annual General Meeting; five employee representatives (elected according to French Law n° 83-675 passed on July 26, 1983); and two representatives of the French government. The Supervisory Board member term of office is five years.

The ERDF Management Board has five members all natural persons appointed for a five year term, and is monitored by the Supervisory Board. The Supervisory Board appoints the Management Board Chairman, and the other Board members based on the Chairman's recommendation. The Chairman, who is appointed for the same term as a member of the Management Board, represents the company to third parties.

Since January 1, 2008, ERDF which is responsible for the management of the public electricity network has been operating EDF's electricity distribution network on the continental metropolitan territory. As set forth in Article 27 of French Law passed on December 7, 2006, ERDF and Gas Distribution France (GrDF), a company created on January, 1, 2008 and fully-owned by Gaz de France (now GDF Suez) which is responsible for the management of public distribution of gas have been jointly carrying out some of EDF's distribution activities. Each company nevertheless manages the portfolio of clients independently.

The activities carried out jointly by ERDF-GrDF do not operate through a structure with the status of a legal entity. They include construction and maintenance of electricity and gas networks, project management, network operation and management, and metering activities.

The joint exercise with Gaz de France (now GDF Suez) of electricity and gas distribution activities goes back to 1951. This "mixed" model ensures greater efficiency and better regional coverage. As a result, approximately one-third of technical and metering services carried out at customer premises relate to both electricity and gas.

This model has created synergies by pooling metering operations, minor maintenance work at customer sites, and the reception of network users (customers, producers, suppliers, and third parties). The model also provides a greater range of career development and motivation opportunities for employees.

#### **ERDF** MISSION

ERDF operates the public electricity distribution network in mainland France according to conditions specified in concession contracts, and provides other public services assigned by French Law. More specifically, ERDF:

- outlines and implements operating, investment, and expansion policies for its electricity distribution network;
- ensures that users and other electricity grids can access its network in a non-discriminatory, objective, and transparent manner, and also provides interconnections with other networks:

- gives users the information needed to access its network efficiently (except for information protected by regulations or law);
- handles relations with energy regulatory bodies (e.g., the French Ministry of Energy, the French energy regulatory commission, and government agencies granting public distribution licenses) in connection with its activities;
- handles relations with local governments;
- negotiates, signs, and executes concession contracts;
- operates, repairs and maintains its electricity distribution network;
- oversees the design and construction of network equipment, and provides project management for these networks;
- provides metering services to network users, including the supply, installation, maintenance, weather checking, and replacement of meters, and the management of data collected from the meters, as well as all responsibilities related to these activities;
- provides non-nationalized distributors, other distributors, and government organizations the services that are specified in Article L2224-31, paragraphs III and IV, of the French General Code for Local Governments; and
- and, more generally, carries out all operational, commercial, financial, or property-related activities necessary to achieve the above.

In 2008, ERDF and GrDF took over 91 million meter readings and performed 10 million customer visits carried out by approximately 13,000 joint technicians

#### CONTRACTUAL RELATIONS FOR THE IOINT ERDF AND GRDF SERVICE

Article 2 and Article 27 of the French Laws were passed on August 9, 2004, and December 7, 2006, respectively, amended Article 5 of French Law n° 46-628 passed on April 8, 1946, and state that "each company is liable for the consequences of its operations carried out under joint services agreements that have no status as a separate legal entity"

On April 18, 2005, EDF and Gaz de France (now GDF Suez) entered into a joint service agreement specifying their respective roles. This agreement outlines the scope of operations of the joint service and how costs will be shared. In 2007, EDF and Gaz de France (now GDF Suez) agreed to amend the agreement dated April 18, 2005 in response to the requirement that the management of electricity and gas distribution networks be legally separated. The amendment arranges, in particular, for the companies' distribution subsidiaries to assume all the rights and obligations set forth in the agreement, and modifies or deletes technical clauses that have become irrelevant as a result of the creation of the two subsidiaries. The amendment also sets forth a procedure for future modifications to the agreement if there are changes in the governing legislation or in the control of either subsidiary (through a negotiations process between the parties and consistent with the financial equilibrium before negotiations were requested), as well as the composition and duties of the supervisory bodies for the joint service (Executive Board and Committee). This agreement was contributed by EDF and Gaz de France (now GDF Suez) to ERDF and GrDF at the time  $\,$ of their creation.

The agreement was entered into for an unlimited duration and may be terminated at any time upon 18 month's notice, during which the parties must undertake to renegotiate a new agreement. If a new agreement is not entered into at the end of this period, the parties will refer the issue to the dispute resolution procedures described below.

This agreement also specifies how the joint service will be governed (e.g., organized, monitored, and modified). It gives each company the freedom to develop its own operations within the joint service. If a decision made by a company has an impact, notably financial, on the other company, an impact study is conducted and any damage would be covered by payment of financial compensation and/or by an amendment to the agreement. Decisions relating to joint operations are made jointly by the two companies. Neither ERDF nor GrDF can impose a decision without the prior consent of the other party.

The joint service agreement can be amended:

- at the initiative of ERDF or GrDF. An impact study may be carried out to that effect, if necessary;
- in the event of an amendment of the law. The agreement would be adapted to take into account the applicable legislative and regulatory changes while maintaining the agreement's overall equilibrium;
- in the event of a change in economic circumstances. The conditions set forth in the agreement, in particular the financial conditions, have been determined in accordance with accounting, tax and cash management provisions that were in force at the date of the agreement's execution. They were also determined in relation to economic or legal circumstances applicable at the time of the agreement's execution. Consequently, if subsequent to a change of circumstances that had led ERDF and GrDF to enter into the agreement:
  - if one of the parties becomes subject to any tax, legal, economic, financial or other actions or events or legal proceedings implying significant consequences, particularly financial, for such party; or
- if the provisions of the agreement become irregular or illegal, with the effect of increasing the costs incurred by a party through the commitments undertaken pursuant to the terms of the agreement, significantly decreasing the benefits that such party receives from the agreement or rendering the agreement irregular or illegal, then the party in question would immediately notify the other party,

parties will negotiate in good faith to take into account the new cir-

Furthermore, the agreement sets forth the methods for resolving disputes between the parties. If needed, the parties will meet to take whatever measures necessary to reach an amicable resolution within one month maximum.

In the absence of an amicable agreement at the end of this one-month period, ERDF and GrDF both agree to forward immediately, pursuant to the required confidentiality rules, the litigious issues immediately to the members of the Management Board who have been delegated for this purpose, in order to reach an amicable resolution within 20 days.

In the absence of an amicable resolution between the parties, the dispute will be submitted, before submission to any court with jurisdiction, to an external mediation procedure. Upon mutual agreement, the parties will appoint a mediator and define his mandate and the time-frame within which such mandate should be accomplished. The resolution recommended by the mediator is neither obligatory nor enforceable.

In the event that either party rejects the mediator's resolution, the dispute may be submitted to the Paris courts, which have sole jurisdiction over any dispute related to the formation, validity, execution or interpretation of the agreement.

#### **ALLOCATION OF COSTS AND PROPERTY**

The ERDF-GrDF joint service incurs different types of costs:

- costs connected with the joint service that are related directly to one of the companies, whatever their nature, are allocated directly to the relevant company. They do not, therefore, give rise to any financial flows. Thus, with respect to joint service employees who are permanently and solely assigned to electricity activities, the corresponding costs are allocated directly to ERDF;
- costs related to activities that are performed simultaneously, and without distinction for both ERDF and GrDF, whatever their nature, are allocated between the parties according to contractual allocation formulas. These

costs are allocated at source between ERDF and GrDF; i.e., when the expense is incurred, and each company's share is entered directly into the accounts of the respective parties. These costs do not give rise to any financial flows between ERDF and GrDF. The elements used for the calculation (cost base and allocation formula) are defined in exactly the same manner for ERDF and GrDF. Cost will usually be allocated based pro rata on the number of network users. By way of example, the allocation formulas resulted in an overall allocation of 75% for ERDF and 25% for GrDF in 2008. Regarding the joint service employees who are permanently assigned to both electricity and gas operations, the corresponding costs are allocated directly and entered into the accounts of ERDF and GrDF according to the applicable allocation formula;

• on the other hand, some costs may first be incurred and entered into the accounts of one of the two companies and then be invoiced to the other company. For example, some joint service employees are assigned for administrative reasons - and in accounting terms - to one of the two companies but may, on occasion, undertake work for the other company. The hours worked for the other company are recorded daily and are invoiced each month. In 2008, €72 million were thus invoiced by ERDF to GrDF and €58 million were invoiced by GrDF to ERDF. The other joint services are performed by – and entered into the accounts of – one of the two companies, which then bills the other on the basis of the contractual allocation formula. These services mainly involve IT and telecommunications, automobile services and real estate. In 2008, these joint services (excluding real estate) resulted in €47 million of billings from ERDF to GrDF and €24 million from GrDF to ERDF. As regards joint activities real estate, ERDF billed €71 million to GrDF and GrDF billed €65 million to ERDF in 2008.

#### 6.2.2.3 ISLAND ENERGY SYSTEMS

The Island Energy Systems (Systèmes Energétiques Insulaires, or "SEI") comprise the electricity networks operated by EDF that are not interconnected or only connected to a very small extent to the continent: mainly Corsica, the French overseas departments, and overseas communities Saint Barthélémy, Saint-Martin and Saint-Pierre-et-Miquelon. All of these territories correspond to "zones that are not interconnected with the network in metropolitan France" (Zones Non Interconnectées au réseau métropolitain continental, or "ZNI"), referred to in article 2 of the French Law n° 2000-108 of February 10, 2000 as amended by the French Law n° 2006-1537 of December 7, 2006. They share the following characteristics:

- these territories benefit from tariff equalization with continental metropolitan France; and
- the small size of their electrical network and the lack or the insignificance of their interconnection with a continental network means that the generation costs are structurally far higher than those in metropolitan France and, for this reason, much higher than the portion reflected in the tariffs.

This situation has notably for consequence that the legislator considers the additional generation costs in these SEI to be a public service charge and these costs are therefore compensated by means of a contribution to the public electricity service (Contribution aux Charges de Service Public de l'Electricité, or "CSPE") (see section 6.4.3.4 ("Public Service in France")).

EDF's organization in each of these territories is therefore based on maintaining an integrated structure that guarantees the main part of generation and all supply-demand balance management functions, network operator functions (HTB, HTA and BT) and supplier functions.

In these networks, given the existing imbalance between the MWh generation cost and the sale price at the equalized tariff, EDF's sales activities consist of managing electricity demand, either alone or in partnership with the Environment and Demand-Side Management Agency (Agence de l'Environnement et de la Maîtrise de l'Energie, or "ADEME") and local institutions.

Most of the Island Energy Systems, however, have experienced significant growth in their consumption (high rate of demographic growth and/or late technological developments in household equipment). This increase in demand must be met by the creation of new generation plants, which are decided upon by the Minister of Industry within the scope of the Multi-Year Investment Program, either by means of invitations to tender or by authorizing projects developed by private operators. The operators' interest, including EDF, to invest in SEI generation was strengthened by an order taken by the Minister of Industry, on March 23, 2006, setting to 11% the nominal remuneration rate before tax of fixed capital in production investments made in Corsica, overseas department, St Pierre and Miquelon and Mayotte.

#### RECENT EVOLUTIONS AND MID-TERM PROSPECTS

#### PROJECTED INVESTMENTS IN GENERATION BETWEEN NOW AND 2015

The ministerial order that defined this Multi-Year Investments Program (Programmation Pluriannuelle des Investissments, or "PPI") was taken on July 7, 2006: it gives a figure of the objectives of implementation of centralized means of generation for the SEI of 1,230 MW in 2015. This figure covers the need to upgrade 6 of the 7 main diesel power stations.

On the basis of the strategy adopted, to remain, the leading actor in each of the Island Energy Systems, as regards installed capacity the EDF group has undertaken:

- a project to upgrade 6 of the 7 main diesel power stations beginning in 2010 in Corsica and in French overseas departments. This project, which will also help satisfy emerging needs, will be conducted by a wholly-owned subsidiary of the Group "EDF Production Electrique Insulaire SAS", created for this purpose in December 2006. The project will provide a total of 900 MW by 2015. EDF Production Electrique Insulaire signed in October 2008 with the MAN corporate consortium - Clemessy - Eiffage a turnkey supply contract for the three power stations of East Port (Reunion), Jarry North (Guadeloupe) and Bellefontaine 2 (Martinique) with the possibility to supply the power stations of Corsica and of French Guiana with motor
- starting construction of a hydropower station at Rizzanèse, in Corsica. This plant, representing an investment of €200 million, will be brought into service in 2012:
- extending the Rivière de l'Est Hydro Power Station on La Réunion. The extension, representing an investment of €20 million, will be brought into service in 2009.

#### PROJECTED INVESTMENTS FOR DISTRIBUTION UP BETWEEN NOW AND 2010

Following the passage of Cyclone Gamede over La Réunion (February 2007), followed by Hurricane Dean in Martinique and Guadeloupe (August 2007), EDF has initiated for the 2008-2010 period a €40 million program for reconstructing the networks in these overseas departments or improving resistance to tropical storms.

#### 6.2.2.4 TARIFFS FOR USING THE PUBLIC ELECTRICITY TRANSMISSION AND DISTRIBUTION NETWORKS (TARIF D'UTILISATION DES RÉSEAUX PUBLICS DE TRANSPORT ET DE DISTRIBUTION D'ELECTRICITÉ, OR "TURPE")

Pursuant to the French Law n° 2000-108 of February 10, 2000, the tariffs for using the public electricity transmission and distribution networks are adopted jointly by the Ministers of Economy and of Energy upon a

proposal from the Energy Regulation Commission (Commission de Régulation de l'Energie, or "CRE").

The current Tariffs for Using the Public Electricity Transmission and Distribution (TURPE 2), approved by a decision dated September 23, 2005, by the public authority, are into force since the January 1st, 2006.

The Tariffs for Using the Public Electricity Transmission and Distribution Networks are set up in order to cover:

- the cost of transmission and distribution activities, while integrating the productivity gain targets set by the regulatory authority;
- a financial compensation equal to the regulated assets base, estimated on January 1<sup>st</sup>, 2006 at €10,799 million for transmission and at €26,324 million for distribution, multiplied by a fixed compensation rate corresponding to a nominal rate before tax of 7.25% (instead of 6.5% for the former TURPE).

In addition, the CRE considered it necessary to deploy a mechanism to compensate for the effects of external factors on the income and expenditure of network managers that are beyond their control. The income and expenditure adjustment account ("CRCP") records off-balance sheet, in previously identified headings, all or part of the excess or shortfall of the network manager, then covered by a reduction or an increase in the charges to be recovered through the tariffs for using the public electricity networks over the following five years (see note 32.6 to the consolidated financial statement as of December 31, 2008).

Given the uncertainty in respect of the organization of distribution activities within the context of the full opening of the market on July 1, 2007, the CRE believed that the tariff rules should be adjusted again towards the end of 2007. In October 2007, the CRE opted to extend the tariff for 2008. Following two public consultations in February and in August 2008, the CRE addressed on October 30, 2008 a tariff proposal to the Minister of Ecology and the Minister of Economy. The CRE announced that, within the frame of TURPE 3, its intention is to set multi-year incentive tariffs as well as incitation measures for the control of costs and improvement of quality.

By a decision dated December 19, 2008 (Journal Official of December 27, 2008), the Ministers rejected the proposition of the CRE, for the following reasons:

- postponement of the closing date for the implementation of the mechanical securitization of RTE-EDF Transport from 2017 to 2024 in the proposal (the government wants to maintain the deadline of 2017);
- lack of temporal and seasonal differences in the proposed tariff structure, especially for high voltage networks, and lack of amplitude of such a differentiation in particular for low voltage, which might encourage consumers to limit their consumption to peak periods.

Moreover in a press release dated December 22, 2008, both ministries have mentioned the need for short-term changes in the tariffs using the electricity networks, in order to be able to conduct significant investment programs and to ensure continuous quality of power supply. As a result, they asked the CRE to provide within two months a new proposal taking into account the observations mentioned above.

On February 26, 2009, the CRE made a new proposal to the Minister of the Economy and of the Energy, which takes into account these observations and relates to a four-year period.

# 6.3

## Presentation of the EDF group's international activity

In 2008, the EDF group had a strategy of consolidating its assets portfolio around the business model of an integrated energy company in Europe. Furthermore, it has expressed its growth objective in the nuclear generation domain as an investor and operator in the United Kingdom and investor and future operator in China and the United States.

On the basis of studies of the International Agency for Atomic Energy (IAEA) and of the Nuclear Energy Agency (NEA), EDF group estimates that by 2020, 140 GW of nuclear capacities will be built in the world taking into account both renewal by existing nuclear power stations, mainly in Europe and in the United States, and new construction to meet demand growth, particularly in Asia and Russia. The experience and the resources provide EDF with the potential to thrive to be a major player in the revival of nuclear power.

In this context, EDF has set to itself five involvement criteria for in nuclear projects abroad. The matter is to select countries:

- having made the choice of nuclear power in the short term;
- knowing EDF and where EDF is welcome;
- providing opportunities for investors in nuclear power (legislative framework, waste management, public opinion, etc.);
- for projects on models of controlled reactors;
- and consistent with the financial and political goals of the Group's risks.

EDF has targeted a number of geographic priorities: the United Kingdom, China, the United States, South Africa, and Italy.

In each country, EDF adapts itself to the institutional and industrial environment. The resulting organizational models are each time different.

#### **6.3.1** Europe

#### **EUROPEAN CONTEXT**

The trend towards greater integration of electricity and gas markets have continued during 2008; it is in particular worth mentioning:

- a convergence of national regulatory systems that should be further reinforced by the 3<sup>rd</sup> EU directive on the "internal market";
- the development of coupling of electricity wholesale markets, including the planned expansion in 2009 Trilateral market (France, Belgium, Netherlands) to the Luxembourg and to Germany, which should allow a better use of interconnections and smaller price differences;
- the consolidation of market players with some important transactions, such as the merger Gaz de France – Suez, the stake acquisition of ENEL in Endesa and of ENI in Distrigas, the acquisition by E.ON of part of Endesa's assets (in Italy, in France, in Spain, etc.) and the takeover bid of EDF on British Energy.

However, the very sharp increases in energy prices brought most states to an increased focus on this strategic sector, either by intervening directly in players reorganization (example of Spain) or by intervening at the level of price fixing to customers. The economic crisis will probably only strengthen this tendency. The European Union is particularly committed in the fight against climate change. The implementation of its guidance in the legislative package "Energy Climate" should have a lasting impact the electric and gas sectors.

In this context, the EDF group's goal is to keep on being a major operator in the development of a fluid energy market in Europe by actively participating in the construction of this new market (interconnections, practices harmonization, etc.) particularly involved in the Sustainable Development.

#### THE GROUP'S AMBITIONS IN EUROPE

The Group's ambition is to create a coherent industrial group with its current main positions in Europe. The Group will review any new opportunity of profitable development in Europe which is its core market. Besides, the Group intends to continue building its gas assets, which are necessary to its ambition of becoming an important gas operator, in order to secure its offer, to provide its customers with a multi-energy offer and to have competitive means of electricity generation through gas.

This coherent industrial group, to be built from the Group's industrial base and shareholdings, will enable its main European subsidiaries to fully contribute to its strategy.

The Group is implementing operational synergies among its various entities in France and Europe with the following objectives:

- to improve the operational performances by sharing the best practices observed within the Group;
- to have a number of entities on a single network in order to optimize the fleet, reduce the costs of peak consumption coverage and to be able to propose an offer to multi-site customers in Europe;
- to use the opportunity of construction projects of generation assets in the various subsidiaries in order to standardize the conception and to group the purchase orders to equipment manufacturer; and
- to coordinate the gas supplies and investments in order to further the Group's ambitions in the gas market.

The table below sets forth the general features of the EDF group's main subsidiaries and holdings in Europe (as of December 31, 2008):

Company name	Main activities	Technical data
Germany		
EnBW	Electricity Generation,	Number of customers: approximately 6 million <sup>©</sup>
	Electricity Transmission, Distribution,	Installed electric capacity: 15.0 GW
	Gas Transmission, Distribution,	Gas activity: 69.8 TWh <sup>(a)</sup>
	Electricity and Gas Sales Services	
United Kingdom		
EDF Energy	Electricity Generation,	Number of customers-accounts: approximately $5.6 \; \text{million}^{\omega}$
	Electricity Distribution,	Installed electric capacity: 4.9 GW
	Electricity and Gas Sales Services	Gas activity: 30.3 TWh <sup>(2)</sup>
British Energy	Electricity Generation	Installed electric capacity: 10.6 GW
Italy		
Edison	Electricity Generation,	Number of customers: 215,000 customers <sup>(a)</sup>
	Electricity Sales,	Installed electric capacity: 12.1 GW
	Gas Production, Storage and Sales	Gas activity: 13.5 Gm³(2)
Fenice	Electricity Generation,	Installed electric capacity: 533 MW
	Services, Energy and Environment	Installed thermal capacity: 3,201 MWth <sup>(s)</sup>
Spain		
Hispaelec Energia S.A.	Electricity Sales	Number of customers: 22 sites
Elcogas	Electricity Generation	Installed electric capacity: 335 MW
Poland		
ECW	Electricity and Heat Generation	Installed electric capacity: 353 MW
		Installed thermal capacity: 1,225 MWth <sup>(3)</sup>
Elektrownia Rybnik S.A. (ERSA)	Electricity Generation	Installed electric capacity: 1,775 MW
ECK	Electricity and Heat Generation	Installed electric capacity: 460 MW
		Installed thermal capacity: 1,118 MWth <sup>(3)</sup>
Kogeneracja	Electricity and Heat Generation	Installed electric capacity: 363 MW
		Installed thermal capacity: 1,059 MWth <sup>(3)</sup>
Zielena Gora	Electricity and Heat Generation	Installed electric capacity: 221 MW
		Installed thermal capacity: 290 MWth <sup>(3)</sup>
Hungary		
BE ZRt	Electricity and Heat Generation	Installed electric capacity: 410 MW
		Installed thermal capacity: 1,466 MWth <sup>(3)</sup>
DÉMÀSZ	Electricity Distribution	Numbers of customers: 772,920
	Electricity Sales	
Slovakia	-	
SSE	Electricity and Heat Distribution	Number of customers: 704,755
	Electricity, Gas and Heat Sales	
Austria	•	
ESTAG Group	Electricity, Gas and Heat Distribution	Number of customers: 398,058
	Electricity, Gas and Heat Sales Services	

Company name	Main activities	Technical data
Switzerland		
Alpiq	Electricity, Generation, Trading and Sales	Installed electric capacity: 6,595 MW
Belgium		
EDF Belgium <sup>(4)</sup>	Electricity Generation Electricity and Gas Sales Services	Installed electric capacity: 419 MW

Gross values, not adjusted for percentage of ownership interests (including the minority interests).

- (1) Including gas.
- (2) Gross global gas volumes handled by the group's companies including plants' internal consumption.
- (3) MWth: thermal MW for cogeneration, as opposed to electric MW.
- (4) EDF Belgium owns 50% of the Tihange 1 nuclear power plant.

For more information on the consolidation method at December 31, 2008. see note 2.3 in the annex to the consolidated financial statements as of December 31, 2008.

In addition, EDF has a 50% interest in Dalkia International<sup>1</sup>, through its subsidiaries and holdings operating in the energy-related services sector (see section 6.4.1.3 ("Dalkia") below).

#### 6.3.1.1 UNITED KINGDOM

#### **6.3.1.1.1** INTRODUCTION

#### PRICE MOVEMENTS

2008 has seen extreme commodity prices volatility. In UK, this was reinforced by the fact that energy prices are more volatile than those in France and Germany mainly due to a stronger correlation with gas prices compared to those in France and Germany.

Energy prices rose strongly during the first half of the year reflecting the steep rise in global oil prices, which in turn was driven by tight supply margins due to strong demand particularly from China. Since early July, energy prices have fallen sharply in line with other global energy prices reflecting deteriorating global economic conditions. However a depreciating UK pound has reduced the decline in energy prices compared to other global energy commodities.

UK Brent Oil prices rose to \$147/bbl in early July 2008 before falling to \$39.37/bbl at then end of January 2009, a drop of 58.2% compared with prices at the start of 2008. European delivered Coal prices rose to \$217.25/tonne in early July 2008 before falling to \$86/tonne as of December 31, 2008, a drop of more than 20% compared with prices at the start of 2008.

In comparison year-ahead gas prices reached a peak of 99.3p/therm in early July 2008 before falling back to 56.04p/therm at December 5, 2008, a rise of 6.7% on prices at the start of 2008. Year-ahead electricity prices ended the year at £53.55/MWh, a decrease of 2.1% compared to prices at the start of 2008.

The EU Emissions Trading Scheme Phase II began on January 1, 2008. Phase Il allowances were trading at €15.90/tonne at December 31, 2008, a drop of 29% from the start of January 2008 (equivalent to £14.82/MWh for coal-generated electricity).

#### **UK GOVERNMENT ENERGY MARKET REVIEW**

On July 11, 2006, the UK government announced the conclusions of its Energy Review. The major energy challenges were stated to be carbon emissions and security of supply. On the advice of the Committee on Climate Change, the Government stated an intention to reduce carbon emissions by 80% by 2050. Regarding security of supply, the government forecasts 80-90% dependence on imported gas by 2020, compared with near selfsufficiency in 2005.

A key conclusion to the review is that the government committed to there being a continuing carbon price signal which investors can take into account when making decisions. The government aims to achieve this through negotiating a stronger EU Emissions Trading Scheme (ETS) post 2012. At the same time they will keep open the option of reinforcing ETS through other measures if necessary.

Action on the generation side is particularly focused on renewables and nuclear.

Following the publication of the Energy Review conclusions, Greenpeace launched a legal challenge questioning whether the government had consulted fully before the decision to allow private investors to invest in new nuclear was taken. The High Court found in favor of Greenpeace and the government launched a new consultation into new nuclear in May 2007 alongside the Energy White Paper, which turned the conclusions of the Energy Review into government policy. The government stated that their preliminary views was that it is in the public interest to allow private investor to invest in new nuclear.

Following the nuclear consultation, which closed on January 10, 2008, the government published a Nuclear White Paper which stated "The Government believes it is in the public interest that new nuclear power stations should have a role to play in this country's future energy mix alongside other low-carbon sources; that it would be in the public interest to allow energy companies the option of investing in new nuclear power stations; and that the Government should take active steps to open up the way to the construction of new nuclear power stations. It will be for energy companies to fund, develop and build new nuclear power stations in the UK, including meeting the full costs of decommissioning and their full share of waste management costs."

The government is now focused on the facilitative actions that are needed to enable new nuclear power stations to be built in the UK, including: a generic design assessment, to establish the basis for licensing new nuclear designs within the UK; new procedures for planning approvals; and arrangements for dealing with nuclear waste and decommissioning.

<sup>1</sup> Excluding indirect holding of EDF through Véolia Environnement.

#### **EDF ENERGY**

EDF Energy, a wholly-owned subsidiary of EDF, is an integrated energy company that participates in the generation, distribution of electricity and supply of electricity and gas in the United Kingdom through its Customer, Energy and Networks Branches. In 2008, it was the number one distributor of electricity (by volume of electricity distributed and by regulated asset value) and number 3 electricity supplier (by TWh sold) in the United Kingdom. EDF Energy is also a significant generator of electricity with a nameplate capacity (excluding PPAs) of 4.9GW.

In 2008, EDF Energy distributed electricity to over 8.0 million homes and businesses in London and in the East and South-East of England over a network of 182,000 km and it supplied 52.1 TWh of electricity and 30.3 TWh of gas. At the end of 2008, EDF Energy had 5.61 million customer product accounts including residential customers, small and medium enterprises ("SMEs") and major business account holders.

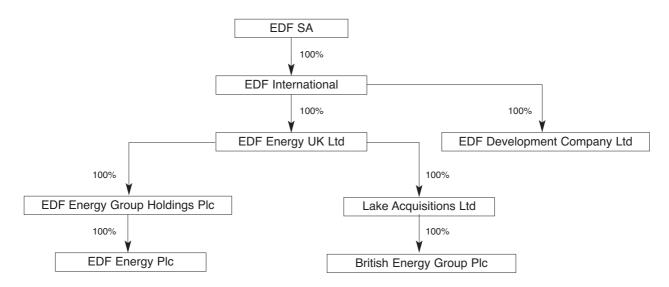
For the year ended December 31, 2008, EDF Energy's sales were €8,244 million. EDF Energy employed 13,406 people at the end of December 2008.

The following chart sets forth the key figures for EDF Energy for the last two years:

	December 31, 2008 <sup>(1)</sup>	December 31, 2007 <sup>(1)</sup>
Sales <sup>(2)</sup> (millions of €)	8,244	8,353
Electricity	5,857	5,667
Gas	1,071	997
Other	1,321	1,693
Profit before tax <sup>(2)</sup> (millions of €)	177	498
Electricity (GWh) (*)	52,069	52,435
Gas (GWh)	30,298	28,685
Number of customer accounts (thousands)	5,560	5,539
Employees	13,406	13,158
Networks Regulated Asset Value (billions of £) (end of March)	3.5	3.2
Networks Regulated Asset Value (billions of €) (end of March)	3.7	4.4

<sup>(\*)</sup> Supplied.

#### ORGANIZATIONAL STRUCTURE OF THE GROUP IN THE UNITED KINGDOM (AS OF THE END OF MARCH 2009)



On November 5, 2008, Lake Acquisitions Limited ("Lake Acquisitions"), a wholly-owned subsidiary of EDF in the UK, submitted to the shareholders of British Energy Group plc ("British Energy") the terms of its public offers to acquire the entire issued and to be issued share capital of British Energy

Group plc other than the "Special Share" (being the special rights redeemable preference share of £1 held jointly by the Secretary of State of Her Majesty's Government and the Secretary of State for Scotland).

<sup>(1)</sup> The exchange rates applied to the balance sheet are £1 per 1.049869 in 2008 and per €1.3636 in 2007 and for the figures in the income statement, £1 per €1.246022 in 2008 and per €1.4550 in 2007.

<sup>(2)</sup> EDF Energy contributions to EDF consolidated financial statements.

<sup>1</sup> A customer can have up to two customer accounts; one for electricity and one for gas.

On January 5, 2009, the public offers were declared wholly unconditional and the acquisition of British Energy came into effect.

The acquisition of British Energy is a major step in the EDF group's development and EDF expects this acquisition to:

- strengthen EDF's role in the global revival of nuclear power through the construction of four EPRs in the UK, with the aim of putting the first EPR into service before the end of 2017;
- enable the use of EDF's and British Energy's combined nuclear expertise and skills in order to increase its overall generation capacity;
- enhance its existing position in the UK power generation market through an immediate acquisition of output and maximization of the lives of the existing fleet where economic and safe to do so;
- lead to revenue, cost and operational synergies in the enlarged group (EDF Energy and British Energy) of approximately €200 million in 2011; and
- meet the investment criteria of the EDF group whilst enabling it to maintain a healthy balance sheet.

The financing of the cash part of the British Energy acquisition was provided by (i) a credit facility of £11 billion, and (ii) EDF's own funds.

The acquisition meets all of the EDF group's investment criteria in strategic, financial and political acceptance terms.

EDF and Centrica are in discussions regarding the granting by EDF of an option to Centrica for the acquisition of an interest in Lake Acquisitions. Centrica would also be entitled to participate in EDF's New Nuclear Build activities in the UK (see section 6.3.1.1.5 ("New Nuclear") hereinafter).

#### **BRITISH ENERGY**

British Energy (comprising British Energy Group plc and its subsidiaries) is the UK's largest electricity generator, employing over 6,000 people. The British Energy group owns and operates eight nuclear power stations and one coal-fired power station in the UK and sells its electricity through the wholesale market and to industrial and commercial customers.

British Energy was listed on the official list of the UK Listing Authority; its shares were traded on the London Stock Exchange and it was a member of the FTSE 100 index. Following the acquisition of British Energy by Lake Acquisitions on January 5, 2009, an application was made to the UK Listing Authority to cancel the listing of British Energy shares on the official list and to the main market of the London Stock Exchange for cancellation of admission to trading of its shares. British Energy was de-listed and its admission to trading cancelled on February 3, 2009.

For the year ended March 31, 2008, British Energy reported revenues of £2,811 million and net profit attributable to shareholders of £335 million.

The following table sets out the key figures for British Energy for its last two financial years:

March 24 2009

March 24 2007

Sales (millions of £)         2,811         2,999           Electricity         2,800         2,988           Gas         —         —           Other         11         11           Profit before tax (millions of £)         538         796           Electricity (GWh) (*)         58,458         58,432           Gas (GWh)         —         —           Number of customer accounts         1,081         1,662           Employees         6,121         5,939		March 31, 2008	March 31, 2007
Gas         —         —           Other         11         11           Profit before tax (millions of £)         538         796           Electricity (GWh) (*)         58,458         58,432           Gas (GWh)         —         —           Number of customer accounts         1,081         1,662	Sales (millions of £)	2,811	2,999
Other         11         11           Profit before tax (millions of £)         538         796           Electricity (GWh) (*)         58,458         58,432           Gas (GWh)         -         -           Number of customer accounts         1,081         1,662	Electricity	2,800	2,988
Profit before tax (millions of £)         538         796           Electricity (GWh) (*)         58,458         58,432           Gas (GWh)         -         -           Number of customer accounts         1,081         1,662	Gas	-	_
Electricity (GWh) (*)         58,458         58,432           Gas (GWh)         -         -           Number of customer accounts         1,081         1,662	Other	11	11
Gas (GWh)         -         -           Number of customer accounts         1,081         1,662	Profit before tax (millions of £)	538	796
Number of customer accounts 1,081 1,662	Electricity (GWh) (*)	58,458	58,432
	Gas (GWh)	-	_
Fmployees 6 121 5 939	Number of customer accounts	1,081	1,662
U,121 3,333	Employees	6,121	5,939

(\*) Generated.

#### THE COMBINED ENTITY

In 2009, the integration of British Energy and EDF Energy will form the largest integrated energy company in the UK. Based on EDF Energy's and British Energy's respective market position at the end of 2008, the combined entity was:

- Number one distributor of electricity, with a regulated asset value of £3.5 billion;
- Number one electricity supplier, with 73.4 TWh sold;
- Number one generator of electricity, with a nameplate capacity (excluding PPAs) of 15.5 GW1.

#### **6.3.1.1.2** EDF ENERGY

#### 6.3.1.1.2.1 EDF ENERGY'S ACTIVITIES

#### Generation

EDF Energy's strategy is to be vertically integrated. It has an objective to reduce the intensity of carbon dioxide emissions from its electricity production by 60% by 2020. In support of this, EDF Energy plans to develop a diverse generation mix that will include nuclear, renewable and fossil fuel generation.

In respect of fossil fuel generation, there is an expected decline in the volumes purchased through existing long-term contracts and the volumes generated by the company's coal-fired power plants due to environmental constraints after 2015.

1 Does not take into account European Commission Commitments (see section 6.3.1.1.2.1 ("Offers"))

To compensate this decline, EDF Energy has explored opportunities to:

- 1. acquire stakes in power plant generation capacity such as British Energy;
- 2. invest in new generation capacity on its existing sites such as West Burton B CCGT; and
- 3. enter into long-term purchasing contracts.

#### **Fossil Fuel Generation capacity**

EDF Energy operates three major generation power plants in the United Kingdom with a total generation capacity of 4.9 GW, namely:

- Sutton Bridge located in Lincolnshire. Sutton Bridge is a Combined Cycle Gas Turbine ("CCGT") power plant with a capacity of 803 MW. It was commissioned in May 1999.
- Cottam located in Nottinghamshire. Cottam is a coal-fired power plant with a capacity of 2,008 MW generated by four units. The final unit was commissioned in 1970.
- West Burton located in Nottinghamshire. West Burton is a coal-fired power plant consisting of four coal-fired units and two 20 MW OCGTs, with a total capacity of 2,052 MW. The final unit was commissioned in 1970.

EDF Energy also holds interests in other generation activities, including combined heat and power plants in London and wind farm schemes in North-East and Eastern England.

EDF Energy's generation portfolio is diversified between gas-fired and coalfired power plants which can undertake either base load or cycling duties. Overall, in 2008, it generated 27.2TWh of electricity. The output from EDF Energy's generation plants covers the customer demand from EDF Energy's SME and residential customers, while demand from large business customers whose consumption is measured on a half-hourly basis is covered back to back through wholesale market purchases.

#### West Burton B Combined Cycle Gas Turbine

As part of this strategy, EDF Energy is constructing a 1,311MW Combined Cycle Gas Turbine power station (CCGT), comprising three 437 MW multishaft units, at West Burton in Nottinghamshire, adjacent to the existing coal fired power station.

The West Burton B project was granted consent under section 36 of the Electricity Act on October 30, 2007 and, following site preparation works, construction started in September 2008. The new plant is based on an EDF group design by EDF's thermal fleet engineering division, the latter acting as Managing Contractor. The procurement strategy has adopted a Group approach, providing synergy benefits through reduced engineering costs and procurement savings from economies of scale.

It is planned that the station will be commissioned in 2011 with the first of the three units to start generation in 2010.

#### Renewables

In June 2008, EDF Energy and EDF Energies Nouvelles announced a new 50/50 joint-venture Company, EDF Energy Renewables. Through this jointventure, EDF Energy is planning to increase renewable generation capacity in the United Kingdom to 1,000MW (onshore equivalent) in the next decade.

The joint-venture now owns, operates or has consent for wind farms with an expected capacity of 218MW. In addition there is a pipeline of projects which are in the process of development.

#### **Sustainable Energy Solutions**

EDF Energy operates and manages three Combined Heat and Power (CHP) schemes:

- Thames Valley Power (TVP) is a 50/50 joint venture with ATCO that owns and operates a 15MW scheme within London's Heathrow Airport;
- London Heat & Power Company (LHPC) manages a 9MWe scheme for Imperial College in London;
- Barkantine Heat & Power Company (BHPC) is a 1.4MWe scheme that is wholly-owned by EDF Energy and serves the Barkantine Estate in the London Borough of Tower Hamlets.

In the last year additional premises have been connected to BHPC to optimize the existing capacity and work is in hand to secure additional new developments to support an extension of existing facilities. Further development will examine the economic feasibility of establishing a satellite energy center to serve further expansion.

#### Fuel and energy purchasing and risk management

#### **GENERAL PRINCIPLES**

EDF Energy buys and sells residual power and purchases gas, coal, CO<sub>2</sub> and other required commodities on the wholesale markets to fulfill the needs of its generating plants and EDF Energy's customers.

The Company is adopting a risk management strategy which differs according to customer, as follows:

• For customers whose consumption is measured and recorded every half-hour the risk management-strategy is to hedge energy sale contracts back to back through forward purchasing agreement as soon as practicable;

• For other customers, especially residential customers and SME, the risk hedging strategy implemented by EDF Energy entails determining a minimum exposure to the risk of variations in energy costs on wholesale markets and sale prices compared to competition. Once this target exposure has been determined, maximum and minimum hedging levels and limits on risk management are set and provide the basis for the procurement strategy for all raw materials (coal, gas, power, fuel/gas oil and carbon).

#### **ELECTRICITY PROCUREMENT**

Over and above its own generation, EDF Energy buys electricity through:

- long-term purchase contracts with Barking (in London) and Teesside CCGT (in north-east England) power stations and with Scottish and Southern Energy with the first of these expiring in 2008. These electricity purchase contracts represented approximately 4.8 TWh of electricity in the year,
- contracts with generators who are connected directly to distribution networks, without the need for the transmission network. These are mainly electricity generators using renewable energy sources. Purchase of generation from these sources allows EDF Energy to provide itself with its own electricity as close as possible to where the demand for the electricity is required, thus reducing its transmission costs. EDF Energy purchased approximately 2.6 TWh in the year from this market; and
- wholesale purchase contracts based on quantities and variable periods, designed to meet EDF Energy's policy within the bounds of risk parameters set out in advance. EDF Energy purchased approximately 28.2 TWh in the year by this method.

In distributing the electricity generated and purchased, losses of approximately 3.6 TWh per year were incurred.

#### GAS AND COAL PROCUREMENT

Gas procurement, both for end-users and for the Sutton Bridge power plant (41.7 TWh), relies on a contract portfolio that is diversified in terms of types of contract, terms and conditions and counterparties.

EDF Energy is working with other companies in the EDF group, like EDF Trading and EDF Gas Division, to explore opportunities to access long term supply contracts or invest in gas assets to achieve better long term management of the risks associated with gas procurement. This is expected to include investment in gas storage facilities that can help to manage the exposure to seasonal spreads and volatility of wholesale gas prices.

As part of this strategy, EDF Energy is developing a project to co-invest with EDF Trading in an expansion of their Hole House gas storage facility in Cheshire

Purchases of coal are based on generation forecasts and coal stock target levels. The EDF Energy contract portfolio is drawn up for approximately 40% of coal from the United Kingdom and 60% from international sources. In 2007 and 2008, EDF Energy entered into various coal provision contracts with indigenous coal producers at a price that is lower than the market price for imported coal.

#### Supply

UK energy market liberalization was launched as early as 1986 and as market liberalization started early; the market in the United Kingdom is deemed one of the most competitive markets in Europe.

Churn rates in the UK are persistently significantly high (circa 20% for gas and electricity). At least 75% of consumers who take both gas and electricity, equivalent to just under 20 million households, have switched at least once since market opening, unrivalled statistics for Europe.

Commodity prices are very volatile and can easily double or plummet within a year. Retail tariffs follow the overall trend but limit tend to reduce the impact of short term volatility. As a result, a hedging strategy that efficiently smoothes market volatility is a key competitive factor for all suppliers.

Following a rise in the wholesale markets in the second half of 2007, EDF Energy raised its prices by 7.9% for electricity and 12.9% for gas on January 18, 2008. This upward trend in wholesale costs continued in the first half of 2008 and further increases of 17% for electricity and 22% for gas were implemented on July 25, 2008.

Further to the subsequent wholesale market price decrease in the second half of 2008, EDF Energy announced, on 13 February 2009, a cut in its prices for its standard rate electricity customers of up to 12.5%. The average change is a reduction of 8.8%.

During 2008, EDF Energy rolled out a series of nationwide campaigns, increasing awareness and association of the brand with sustainability and the 2012 Olympics. As of December 28, 2008, EDF Energy had 4.087 million customers and 5.560 million customer accounts. It supplied 19.6 TWh of electricity to 3.429 million residential accounts, 276,107 SME accounts and 32.5 TWh of electricity to 196,795 major business accounts. It also had 1.632 million gas customer accounts to whom 30.3 TWh of gas were sold in 2008. While EDF Energy's residential and SME customers are primarily located in London, the south-east and the south-west of England, its major business customers have sites throughout the country.

In the next few years it aims at stabilizing its market share while increasing its profitability and then renewing customer growth.

#### **ORCHARD PROGRAM**

The Orchard Program is at the heart of EDF Energy's aspiration to become more competitive and more profitable, to enhance customer experience and through this to preserve and eventually develop its customer base. It aims to transform the way EDF Energy does business with its residential and small to medium-sized customers through new ways of working supported by the delivery of new business processes and IT systems.

A review of the current business model identified that existing systems and processes were inflexible. This stopped the business delivering the best possible customer experience whilst creating additional costs in the business. It is expected that over the next two years new processes will be designed, databases will be cleansed and systems renewed; internal training concerning these changes should be put in place and user testing carried out in order that by 2011, customers will have been migrated to the new systems. All of these measures are designed to improve customer satisfaction through more secure payment methods, greater data accuracy and increased efficiency in the management of new customer contracts.

Post-Orchard benefits to the customer will include:

- simpler payment methods;
- a self-service option;
- one bill and one set of communications for gas and electricity customers;
- a wider range of choices in the way customers can contact EDF Energy; and
- direct online management of customers' accounts via a secure network (subject to choosing the Orchard Program's self-service option).

The Networks Branch of EDF Energy operates the three contiguous licensed distribution networks in London, the East of England, and the South-East of England along with a number of private networks and infrastructure projects. As required by the Office for Gas and Electricity Markets (Ofgem) in its regulation of Distribution Network Operators ("DNOs"), the Networks Branch is managed and operated as a separate legal entity from the rest

of the EDF Energy group and its financing is ring-fenced so as not to restrain or hinder competition or create distortions in competition in relation to the supply of electricity or gas, electricity generation or the transmission of gas.

#### **PUBLIC NETWORKS**

EDF Energy's network covers over 29,000 km2 and distributes 87 TWh of electricity annually through 47,000 km of overhead wires and 135,000 km of underground cables. EDF Energy is the largest distributor of electricity (by volume and regulated asset value) in the United Kingdom, distributing electricity to 8.0m customers.

Each distribution network operates under very different operating conditions with a concentrated urban network in London and a mix of rural and urban networks in the South and East of England. EDF Energy invested over £530 million in its network during 2008 on asset replacement, reinforcement and extension. The network performance is stronger in London in terms of continuity of supply due to the fact that its network is almost entirely underground and is less affected by the extremes of weather, whereas a proportion of the network serving the other regions is above ground.

The networks business generates income through Distribution Use of System ("DuoS") charges levied against the supply companies that the end customer has a contract with. The charges levied by EDF Energy's DNOs are among the lowest in the United Kingdom.

#### **DISTRIBUTION PRICE CONTROLS**

The regulated businesses are subject to a five-year price control which is the result of data analysis and negotiation which takes place during the period leading up to period to which the price control relates. The next price control is effective from April 1, 2010 and initial proposals are expected to be issued by Ofgem, the industry regulator, during the first half of 2009. The price control will set levels of capital expenditure to be incurred over the period April 1, 2010 to March 31, 2015 against which a financial return will be made. The financial return is collected via charges for the use of the electricity distribution network which are intended to recover depreciation of the regulated asset base, an efficient level of operating costs and a reasonable profit margin.

#### UNDERGROUND CABLES

Like all distributors in the United Kingdom, EDF Energy's networks contain Fluid Filled Cables ("FFC"). These cables can leak and pollute ground soil. The Environment Agency, Ofgem and distributors have had discussions concerning this problem.

In recognition of Ofgem's concerns to ensure a common industry approach, EDF Energy led an industry working group which produced an industry 'Best Practice Guide' (ETR 135) on the management of FFCs.

EDF Energy has conformed to current best practice in developing its leak management strategy whilst monitoring and analysing leakage rates. Predominantly all of the FFC owned by EDF Energy have now been mapped to the Environment Agency's environmental sensitivity map, which enables the business to understand where FFCs are close to, or cross, a high sensitivity area. This, together with FFC condition enables the business to determine replacement policy.

Operational techniques have also developed alongside the longer-term strategic view. The business has developed a new leak location technique over several years. This has been fully implemented and further developments are now in hand to further improve the technology. This enables rapid leak detection and repair, thereby significantly reducing oil leakage.

Taken together, these developments have enabled EDF Energy to contain capital replacements of FFC during the current price control period within the £58 million capex allowance, while containing leakage (especially in environmentally sensitive areas) to levels previously thought possible only through a significantly larger replacement program.

#### Private Networks and Private Finance Initiatives/Public Private Partnerships PFI/PPP

EDF Energy provides a wide range of commercial and technical solutions for infrastructure projects and a number of PFI/PPP asset infrastructure and electrical distribution networks projects.

The basic premise for PFI and PPP contracts is that a private-sector company or consortium finances, constructs/refurbishes and then manages a public asset over a long-term contract, typically 25 to 30 years. While the private sector funds the initial capital-intensive construction/refurbishment phase, it is subsequently reimbursed for the capital, finance and maintenance costs by a relatively flat monthly payment from the owner of the public assets throughout the period of the contract.

EDF Energy has built up a portfolio of contracts through successfully winning PFI/PPP asset infrastructure and electrical distribution networks projects such as:

- the London airports of Heathrow, Gatwick and Stansted;
- the Docklands Light Railway Lewisham Extension;
- several commercial buildings in the London Docklands.

EDF Energy also has a number of joint venture investment projects:

- an 80% interest in the Powerlink consortium. This project, which was won in 1998, is a 30-year contract to maintain and upgrade the high voltage electrical distribution network for the London Underground system. Annual sales from this contract is approximately £96 million;
- a 49.5% interest in MUJV Limited, a joint venture formed between EDF Energy and Thames Water Services to design and lay all water, wastewater, gas and electricity pipes/cables to the new buildings that Aspire Defence is building for the Ministry of Defence.

EDF Energy's contracting business has several major contracts with customers including Network Rail (Power Supply Upgrade), Pfizer, London Underground and Islington Highway Lighting.

#### STREET LIGHTING

EDF Energy ran three Street Lighting PFI projects: Dorset, Ealing and Islington. The PFI projects required the delivery of capital replacement works (in the first 5 years) and maintenance and renewal over a 25 year period. Strategic reviews, following the decision to integrate Networks and Development branches into a single organization, resulted in the decision to concentrate on core business and sell these projects. They were sold to Scottish and Southern Energy plc on February 29, 2008.

#### METRONET

Metronet is a 30-year Public-Private Partnership (PPP) contract with London Underground to maintain, renew and upgrade two third of London Underground Network's Infrastructure through its two Infracos. Operation of Metronet consortium commenced in April 2003.

EDF Energy's interests in Metronet are:

- a 20% interest in the Metronet Consortium, which held two of the three London Underground Infrastructure PFI concessions, as they have now transferred to a new Transport for London (TfL) entity;
- a 25% interest in (Metronet Alliance) Trans4m, which manage the delivery of station modernizations and refurbishments as well as the maintenance, remediation and development of civil assets;

As Metronet was not able to renegotiate a sufficient share of anticipated cost overruns on the contracts in place, that were identified during a detailed cost review, the Directors of Metronet placed both Metronet Rail SSL Holdings Limited and Metronet Rail BCV Holdings Limited into administration on July 18, 2007. In addition, on August 22, 2007, Trans4m Limited, one of the members of the Metronet Consortium gave notice to London Underground to withdraw from the contract.

The termination came into effect on August 30, 2007. At the request of London Underground and Metronet, EDF Energy entered into a Secondment Agreement with Metronet with effect from August 30, 2007 to second those EDF Energy staff who had been involved in the project to Metronet. This contract was terminated on March 31, 2008. Negotiations are still ongoing between the various parties to terminate all contractual links and

On May 27, 2008 the PPP contracts were transferred to a new Transport for London (TfL) entity with the surviving contractual terms between Metronet and Trans4m remaining with the companies in administration, soon to be put into liquidation. In 2007 EDF Energy appropriately provided for potential risk exposure to Metronet's liquidation.

#### 6.3.1.1.2.2 LONDON 2012

During 2007 EDF Energy entered into a contract on behalf of the whole EDF group to become a tier one "official partner" of London 2012.

EDF Energy is the Official Utility Services Partner as well as a Sustainability Partner. It was the first Sustainability partner to be announced and the second tier one official partner to be announced after Lloyds TSB. At the end of 2008 there were seven tier one official partners including Lloyds TSB, Adidas, BT, BP, British Airways, Nortel and two tier two "official supporters" (Deloitte and Cadbury).

Under this partnership EDF Energy will supply energy from renewable sources for the London 2012 games from renewable sources. EDF Energy will also provide a low carbon fuel for the cauldron. Sustainability will continue to be a central theme in the activation of the partnership.

#### 6.3.1.1.2.3 FINANCING - PENSIONS

#### **FINANCING**

The net debt of EDF Energy and its subsidiaries was £4.834 billion at December 31, 2008, the average cost of servicing this debt has been reduced since 2002 to 5.49% as of December 31, 2008. Liquidity is maintained by committed credit lines totaling £1.875 billion at December 2008. These comprise a committed line of £1.875 billion provided by EDF, of which £0.824 billion was drawn at December 2008. This line is subject to compliance with certain covenants and at present, EDF Energy complies with these covenants.

Most cash flows are denominated in pounds sterling. Cash flows denominated in other currencies are immediately subject to hedging operations to limit exposure to exchange rate fluctuations.

#### **Pension schemes**

EDF Energy sponsors two pension schemes:

- the EDF Energy Pension Scheme ("EEPS") which was established in March 2004 and includes a number of legacy pension schemes from London Electricity and Seeboard. Membership of EEPS is open to all employees;
- the EDF Energy Group of the Electricity Supply Pension Scheme ("ESPS") which was created in September 2005 as a result of the merger of the London Electricity and Seeboard groups of the ESPS. ESPS is closed to new members

Both EEPS and ESPS are final salary pension arrangements and they both undertook formal triennial actuarial valuations as at March 31, 2007 in line with the new scheme specific UK funding requirements. This showed a total deficit of £127 million. To repair this deficit, EDF Energy agreed a recovery plan in which it would make additional payments over the period April 1, 2008 to March 31, 2015 (with the deficit payments front loaded during the first three years).

From an accounting perspective the funding position for each pension scheme as at December 31, 2008 was as follows:

- ESPS had improved over the period 2004 to 2008 due to improvements in equity markets and deficit repair contributions paid by EDF Energy between April 2005 and December 2008. Despite the additional deficit payments in the year made by EDF Energy, the ESPS deficit increased to £270 million at the end of 2008 vs. £246 million at 31 December 2007. The deficit, i.e. the difference between the assets and liabilities, has increased principally due to a large reduction in the assets caused by the dramatic downturn in financial markets in 2008, offset partially by the liabilities reduction resulting from a change in discount rates. The discount rate used is strongly influenced by Corporate bond yields.
- EEPS has grown in terms of members, assets and liabilities. The funding position has not changed greatly over the period 2004 to 2008. At the end of 2008 EEPS was in surplus by £12 million vs. £11 million deficit at December 31, 2007.

In line with UK law the Trustees of each pension scheme issue members with annual funding statements to its investors. These annual funding statements are prepared as at March 31 each year and the combined deficit for both pension schemes as at March 31, 2008 had grown to £511 million. The combined deficit has continued to grow since March 31, 2008 reflecting the turbulent conditions in financial markets and whilst both sets of Trustees indicated to EDF Energy that unless there is a dramatic recovery in financial markets in the next 18 months they would expect an increase in deficit payments following the next valuation in 2010.

EDF Energy has made one pension benefit change in 2008 and this relates to male employees in the London section of ESPS employed before 1988 who could choose to take their pension early. This benefit is known as the "Barber Waiver" and EDF Energy has confirmed to employees in December 2008 that this provision will cease in April 2011.

The Barber Waiver change has no impact on the funding position of the ESPS but it will result in a credit of £32 million in the Company accounts for 2008 due to a reduction in the liabilities of the scheme on a like-for-like basis. Given the Trustees concern about the funding position, EDF Energy has agreed to pay £32 million into ESPS in 2010/2011 if the funding position does not recover to the level anticipated when the 2007 valuation was finalized.

#### **6.3.1.1.3** BRITISH ENERGY

#### 6.3.1.1.3.1 OFFERS

On January 5, 2009, the Group acquired British Energy for £11,998 million (excluding remaining shares outstanding and excluding acquisition-related costs (see note 4.1 at consolidated financial statements for the financial year ended December 31, 2008)).

On September 24, 2008, EDF and the British Energy group announced that they had reached an agreement on the terms of the offer to be launched by Lake Acquisitions Limited ("Lake Acquisitions") for the share capital of British Energy.

On September 25, 2008, Lake Acquisitions announced that it had acquired 274,288,774 British Energy shares at a price of 774 pence per share, representing approximately 26.53% of the share capital of British Energy

On November 5, 2008, Lake Acquisitions announced the terms of its recommended offers to acquire the entire issued and to be issued share capital of British Energy other than the Special Share (being the special rights redeemable preference share of £1 held jointly by the Secretary of State of Her Majesty's Government and the Secretary of State for Scotland).

The terms of the offer for the ordinary shares of British Energy were as follows:

- a cash offer of 774 pence per share;
- alternatively, British Energy shareholders residing in certain EEA member states were invited to receive, if available, in exchange for all or part of their ordinary British Energy shares, 700 pence and one Nuclear Power Note for each ordinary share (the "Partial CVR Alternative"). "Nuclear Power Note" means any note maturing in 2019 issued by Barclays Bank PLC ("Barclays") related to contingent value rights or "CVR" issued by Lake Acquisitions to Barclays. Payments under Nuclear Power Notes (and certificates issued by Lake to Barclays) are calculated on the basis of a formula which aims to enable a benefit from economic exposure to wholesale power prices and the output of British Energy's nuclear fleet. Consequently, the variations in wholesale power prices in the United Kingdom and in the output of British Energy's nuclear fleet may entail an increase in the payments to be made by the Group (through Barclays) under the Nuclear Power Notes.

As part of the Partial CVR Alternative, an additional CVR election facility was also made available, allowing shareholders who elected for the Partial CVR Alternative to elect to receive, subject to availability, two additional Nuclear Power Notes, in lieu of the 148 pence cash consideration that would otherwise have been received.

Lake Acquisitions also made a cash offer of 774 pence for each British Energy convertible share.

The acquisition was subject to certain conditions, including receiving Phase I Approval from the European Commission under the European Commission Merger Regulation ("ECMR"). On November 3, 2008, EDF filed the Form CO with the European Commission. On December 22, 2008, the European Commission announced its decision to approve, subject to certain commitments by EDF, the acquisition of British Energy by Lake Acquisitions. Specifically, EDF has committed to the following, the implementation of which shall occur over the next few years: (i) to divest EDF Energy's gasfired power station at Sutton Bridge; (ii) to divest British Energy's coal-fired power station at Eggborough; (iii) to sell minimum volumes of electricity in the UK wholesale market, ranging from 5 to 10 TWh per year during the period from 2012 to 2015; (iv) to divest, without conditions, one site potentially suitable for the construction and operation of new electricity generation facilities situated adjacent to existing British Energy stations at either Heysham or Dungeness, at the option of the potential purchaser; and (v) to give up one of the combined group's three grid connection agreements at Hinkley Point.

On January 5, 2009, Lake Acquisitions announced that the offers had become unconditional in all respects and the acquisition had become effective. On this date, Lake Acquisitions owned or had received valid acceptances in respect of a total of 1,550,102,522 British Energy shares, representing in aggregate approximately 96.44% of the current issued share capital of British Energy.

On January 5, 2009 British Energy also submitted an application to the UK Listing Authority for the cancellation of listing of British Energy ordinary shares on the Official List and to the London Stock Exchange for the cancellation of admission to trading of British Energy ordinary shares on its Main Market

for listed securities. The cancellation of listing and admission to trading became effective on February 3, 2009.

On January 12, 2009, Lake Acquisitions announced the posting of compulsory acquisition notices pursuant to section 979 of the Companies Act 2006 to British Energy shareholders who had not yet validly accepted the offers. British Energy shareholders had until February 23, 2009 to accept the initial offers, after which any British Energy shares that have not been tendered were acquired by Lake Acquisitions under the terms of the compulsory acquisition notice.

Lake Acquisitions holds all the share capital of British Energy as at the date of the filing of the present Document de Référence except for the "Special Share" (being the special rights redeemable preference share of £1 held jointly by the Secretary of State of Her Majesty's Government and the Secretary of State for Scotland).

#### 6.3.1.1.3.2 British Energy Activities

#### Generation

British Energy owns and operates eight nuclear power stations and one coal-fired power station, Eggborough, in UK.

British Energy's total current capacity is 10.6 GW (of which 8.7GW is from nuclear generation). Total output was 35.7 TWh (of which 29.1 TWh was nuclear output) for the nine months ended December 28, 2008.

British Energy is the lowest carbon emitter of the major electricity generators in the UK and the only low carbon base load generator.

#### **Nuclear generation**

#### BRITISH ENERGY'S EXISTING NUCLEAR FLEET

The existing British Energy nuclear fleet comprises:

- seven "advanced gas-cooled reactor" ("AGR") power stations: Dungeness B, Hartlepool, Heysham 1, Heysham 2, Hunterston B, Hinkley Point B and Torness. Each AGR is powered by two reactors;
- one "pressurized water reactor" ("PWR") power station: Sizewell B, powered by a single reactor.

An AGR differs in many respects from a PWR. Whereas the AGR design is unique to the UK, the PWR design is the most common reactor type in the world.

An AGR has a graphite moderator which helps to control the reaction. The reactor is encased in a steel-lined prestressed concrete pressure vessel several meters thick which also acts as a biological shield. The steam generator in which water is heated is situated inside the pressure vessel. An AGR uses enriched uranium for its fuel and CO<sub>2</sub> as coolant.

A PWR is contained inside a steel pressure vessel filled with pressurized water which acts as the coolant and moderator. The fuel used is enriched uranium dioxide and is contained in zirconium alloy tubes.

#### STATIONS OPERATING LIVES

The potential life time of each of the power stations is determined primarily by the technical and economic practicability of supporting an agreed safety case for that power station in accordance with its nuclear site licence. Any decision by British Energy to extend the operating life of a power station beyond its current scheduled closure date would be based, in large part, on a combination of economic factors and the engineering judgments reached in respect of technical and safety issues.

The adequacy of the safety case for each power station is confirmed at each statutory outage for the following period by undertaking appropriate inspection, maintenance and testing of the plant and reviews of its operating performance. The results are reported to the Nuclear Installations Inspectorate (the NII), which must give its formal consent under the nuclear site licence before the reactor concerned may be restarted. Under this regime a reactor may only be operated following restart during the period determined by the safety case. This period is normally three years for all AGR power stations and two years for the PWR power station. In addition, every ten years British Energy is required to undertake a periodic safety review (PSR) for each power station.

Furthermore, given that certain costs relating to spent fuel management and decommissioning will be borne by the Nuclear Liabilities Fund and/or the UK Government under the agreements entered into in 2005 as part of the restructuring of British Energy (see below "Restructuring Agreements -Costs relating to radioactive waste management and decommissioning"), lifetime extensions would be subject to the consent of the Nuclear Decommissioning Authority (NDA) if the extension would result in an increase in the costs of discharging liabilities. The NDA is obliged to consent if it can be demonstrated that any economic benefits to the Nuclear Liabilities Fund or the Secretary of State deriving from the extension are reasonably likely to exceed the corresponding increase in such costs.

The current accounting lives and corresponding current scheduled closure dates of the power stations in British Energy's existing nuclear fleet are set out in the following table:

Power Station	Start of Generation	Scheduled Closure Date	Accounting Lifetime	Extensions Already Declared by British Energy <sup>(1)</sup>	Scheduled Periodic Safety Review <sup>(2)</sup>
Hinkley Point B	Feb 1976	2016	40 years	15 years	2017
Hunterston B	Feb 1976	2016	40 years	15 years	2017
Dungeness B	Apr 1983	2018	35 years	10 years	2018
Heysham 1	Jul 1983	2014	30 years	5 years	2009
Hartlepool	Aug 1983	2014	30 years	5 years	2009
Torness	May 1988	2023	35 years	10 years	2010
Heysham 2	Jul 1988	2023	35 years	10 years	2010
Sizewell B	Feb 1995	2035	40 years	0 year	2015

<sup>(1)</sup> Life extensions have already been approved by the relevant authorities and are already effective and included in the accounting lifetime.

<sup>(2)</sup> Expected date of response from NII.

#### **CAPACITY AND OUTPUT**

The output of a nuclear power station depends on a combination of its overall generating capacity (which is an indication of the average power level sustainable at the power stations over a period) and its availability. The capacity of each nuclear power station is reviewed and amended from time to time to reflect the long-term capability of the power station.

The table below sets out the current capacity values and output of each of the power stations in British Energy's existing nuclear fleet for each of the last five financial years and the nine-month periods ended December 30, 2007 and December 28, 2008.

Power Station	Capacity			Output <sup>(3)</sup> (TWh)				(3) (TWh) oths ended
	$(MW)^{(1)}$		•	ear ended March	31		Dec 30	Dec 28
		2004	2005	2006	2007	2008	2007	2008
AGR Power Stations								
Dungeness B	1,040	6.7	6.5	5.5	4.5	6.4	4.8	1.9
Hartlepool	1,190	8.3	5.0	5.2	5.6	4.6	4.6	(0.1)
Heysham 1	1,160	6.3	5.1	6.6	7.5	3.7	3.7	(0.1)
Heysham 2	1,235	9.8	8.2	9.2	9.5	8.6	6.3	6.2
Hinkley Point B	820	8.1	9.3	7.7	4.2	5.3	3.6	3.7
Hunterston B	820	8.8	8.3	7.9	3.5	4.0	2.9	3.3
Torness	1,230	8.2	8.3	9.4	7.6	8.0	5.8	7.1
PWR power station								
Sizewell B	1,188	8.9	9.1	8.9	8.9	9.8	7.7	7.1
Total	8,683	65.0	59.8	60.4	51.2	50.3	39.5	29.1
Load Factor <sup>(2)</sup>		77%	71%	72%	61%	65%	68%	51%

<sup>(1)</sup> Capacities are stated net of all power consumed for the power stations' own use, including power imported from the National Grid. Capacities are subject to review each year end. Values quoted above are relevant to the financial year ending March 31, 2008. The capacities quoted reflect expectations for the reference energy generation from the units. In particular, Hinkley Point B and Hunterston B power stations have been adjusted to reflect planned operation at approximately 70% load, due to boiler temperature restrictions.

#### REGULATION

The operation of nuclear power stations is subject to extensive regulation, including regulation of nuclear safety and security (in particular, in relation to the construction, operation and decommissioning of nuclear installations and the protection of workers and the public against ionizing radiations), regulation of the electricity market and environmental regulation.

The Nuclear Installations Inspectorate (the NII), which is part of the Nuclear Safety Division Directorate at the Health and Safety Executive and acts in its name, is the key regulatory body in the regulation of nuclear safety in the UK.

#### Fossil fuel generation

#### **EGGBOROUGH**

The Eggborough coal-fired power station, located in Yorkshire, is owned and operated by Eggborough Power Limited ("EPL"). Unlike the other nuclear stations, which operate as base load plant, Eggborough operates as flexible generation.

The station was acquired in 2000 and the balance of the loan which provided its financing was £111 million at March 31, 2008 (2007: £123 million). The loan was fully repaid on February 10, 2009.

#### **OPTIONS OF THE EGGBOROUGH BANKS**

As part of the Restructuring of British Energy in 2005, the providers of the project finance loan, the "Eggborough Banks", were granted the following options:

• options exercisable at any time prior to August 31, 2009 under which they may acquire the shares in, or assets of, Eggborough Power Limited on March 31, 2010 in consideration for, amongst other things, £104 million (subject to certain adjustments depending on the condition of the Eggborough power station on March 31, 2010) plus the amount prepaid under the project finance loan which would have been due on or after March 31, 2010 (£97 million), together with any premium thereon; and

• options under which they may acquire the shares in, or assets of, Eggborough Power Limited at any time prior to August 31, 2009, on or after the occurrence of an event of default under the project finance loan, in consideration for a fee (which varies depending on the type of event of default) and the cancellation of the balance of the amounts due under the project finance loan.

The Eggborough Banks are entitled to assign and/or transfer all (but not part only) of their right under the options to a third party.

The Eggborough Banks' options, if unexercised, will expire on March 31, 2010.

Following the decision by the European Commission on December 22, 2008 to approve the acquisition of British Energy, EDF has committed to divest Eggborough power station, if the Eggborough Banks do not exercise their options. The sale will be made under terms and to a buyer of EDF's choice, approved in advance by the European Commission. Should the divestment not be completed in due time, EDF will be required to appoint a trustee to carry out this divestment. EDF has also committed to the European Commission that it will ring fence the management and operation of Eggborough and hold it separate from the rest of the Group's fleet by no later than April 5, 2009. This has now been effected and Eggborough is being managed independently by a "hold separate manager" under the supervision of a monitoring trustee.

<sup>(2)</sup> Load factors are obtained by dividing the actual output by the output that would have been achieved had each power station operated at its stated capacity for the period. (3) Output in each year reflects any statutory, re-fuelling and unplanned outages. Numbers are rounded.

#### Operational review of British Energy's existing fleet

#### **OUTPUT AND PERFORMANCE**

Output from British Energy's existing nuclear fleet for the nine months ended December 28, 2008 was 29.1 TWh, which was 10.4 TWh lower than nuclear output of 39.5 TWh in the nine months ended December 30, 2007 ("the comparable period").

The reduction in output for the nuclear fleet principally reflects lost output attributable to the Boiler Closure Unit issue at Hartlepool and Heysham 1 power stations. Output has also been impacted by issues with the Fuel Plug Units at Dungeness and the ongoing impact of operation at reduced load at Hinkley Point B and Hunterston B. Good progress has been made on each of these issues: all four units at Hartlepool and Heysham 1 returned to service over the course of January, February and March 2009; both units at Dungeness B have returned to service; and Hinkley Point B and Hunterston B have achieved operation at around 70% load, as expected. Further detail on each of these issues is set out below.

British Energy continues to benefit from the income from Eggborough power station. Output from Eggborough was 6.6 TWh for the nine months ended December 28, 2008, 0.4 TWh higher than output of 6.2 TWh in the comparable period.

British Energy is committed to safety and environmental excellence and has worked hard to embed a culture of operational safety and excellence through investment in its people and working practices. This is evident from the long term improvement that has been achieved in operating metrics. In particular, Sizewell B, a PWR plant, operates at world class standards.

#### Plant status

#### **BOILER CLOSURE UNITS**

Boiler Closure Units ("BCUs") are unique to Hartlepool and Heysham 1 power stations. There are eight BCUs on each reactor which form part of the reactor pressure boundary. Each BCU is pre-stressed with nine layers of wire windings, wound around its outer periphery.

Following the discovery of a broken wire during planned inspections of the BCUs in October 2007, British Energy decided to take the units at Hartlepool and Heysham 1 out of service. A detailed inspection program has been undertaken to confirm the condition of the BCUs, and engineering modifications developed to address the issue.

The Regulator has had full view of the project throughout. Having made engineering modifications and received the necessary consent from the NII, Hartlepool Reactor 1 was returned to service on January 25, 2009. Subsequently, Heysham 1 Reactor 1, Hartlepool Reactor 2 and Heysham 1 Reactor 2 were returned to service on January 31, 2009, February 19, 2009 and March 16, 2009 respectively.

#### **DUNGENESS B FUEL PLUG**

The length of refueling outages at Dungeness B has been temporarily extended since September 2006 to address an issue with certain welds within the fuel plug units. A crimping machine to lock the fuel plugs in place has been developed and constructed and is now in service.

Reactor 21 and Reactor 22 were returned to service on October 16, 2008 and January 26, 2009 respectively, following completion of crimping and inspection of the fuel assemblies and other repair work.

Normal refueling patterns are expected to be achieved for both units by the end of the calendar year 2009 as remaining fuel plug units are crimped in place and inspected.

#### **BOILERS**

Since the completion of boiler inspections and required repairs at Hinkley Point B and Hunterston B and the return to service of all four units during May 2007 and June 2007, Hinkley Point B and Hunterston B have been operating at around 70% load to limit boiler tube temperatures.

During 2008, three of the four units have been subject to planned boiler inspections and, where necessary, repairs. These three units have been returned to service just above 70% load. A number of engineering solutions are being investigated to enable operating load to be increased further above the 70% level.

#### Нот Вох Доме

Load was reduced on Heysham 1 Reactor 2 to approximately 80% of full load in October 2006 to reduce the temperature on an area within the reactor, known as the Hot Box Dome, below 380°C. Load was subsequently increased to approximately 87% of full load. An assessment is being undertaken to confirm if the current temperature limit can be raised, allowing higher output to be achieved. It is planned that a safety case will be submitted to the NII in due course, applicable to both units at Heysham 1 and both units at its sister station, Hartlepool.

#### Restructuring Agreements – Costs relating to radioactive waste management and decommissioning

Restructuring Agreements were originally entered into on January 14, 2005 (the "Restructuring Agreements") as part of the restructuring of British Energy carried out from 2005 under the aegis of the UK Government in order to stabilize the financial situation of British Energy. Under the terms of the Restructuring Agreements, in relation to British Energy's existing nuclear operations and subject to certain exceptions:

- the Nuclear Liabilities Fund ("NLF"), an independent trust set up by the UK Government as part of the restructuring of British Energy, agreed (at the direction of the Secretary of State) to fund, to the extent of its assets: (i) qualifying uncontracted nuclear liabilities (including liabilities in connection with the management of spent fuel at the Sizewell B power station); and (ii) qualifying costs of decommissioning in relation to British Energy's existing nuclear power stations;
- the Secretary of State agreed to fund: (i) qualifying uncontracted nuclear liabilities (including liabilities in connection with the management of spent fuel at the Sizewell B power station) and qualifying costs of decommissioning, in each case in relation to British Energy's existing nuclear power stations, to the extent that they exceed the assets of NLF; and (ii) subject to a cap of £2,185 million (in December 2002 monetary values, adjusted accordingly), qualifying contracted liabilities for British Energy's historic spent fuel (including in particular liabilities for management of AGR waste from spent fuel loaded prior to January 15, 2005); and
- British Energy is responsible for funding certain excluded or disqualified liabilities (mainly liabilities incurred in connection with an unsafe or careless operation of the power stations) and the obligations of British Energy Limited and British Energy Generation Limited to the NLF and the Secretary of State are guaranteed by the principal members of British Energy.

British Energy has entered into a separate contract, now with the Nuclear Decommissioning Authority, for management of AGR spent fuel loaded from 15th January 2005 and has no responsibility for this fuel after it is received at Sellafield.

The Secretary of State and EDF agreed (and, at the direction of the Secretary of State, NLF has consented) to limited amendments to the Restructuring Agreements in connection with the acquisition of British Energy by Lake Acquisitions. The amendments, among other things and subject to

limited exceptions, restrict the majority of rights and obligations imposed by the Restructuring Agreements only to British Energy and its subsidiaries and subsidiary undertakings, and, accordingly, do not extend similar rights and obligations to EDF, or its subsidiaries and subsidiary undertakings. The amendments do not impact on the contractual funding commitments of the Secretary of State or NLF to British Energy. Certain amendments have been made to the Restructuring Agreements, reflecting British Energy's access to an improved credit rating following the acquisition.

British Energy was required to maintain a minimum cash reserve, which was, as at March 31, 2008, £490 million plus the amount by which cash employed as collateral exceeded £200 million. The amendments allow this reserve to be reduced to £290 million or further reduced to nil provided irrevocable Committed Facilities of the same amount are put in place between a member of the EDF group, with an investment grade rating, and British Energy.

#### **Financing**

As part of the Restructuring, £700 million of bonds (the "Bonds") were issued by British Energy Bond Finance plc (formerly British Energy Holdings plc) to certain creditors, including the NLF. The Bonds carried an interest rate of 7% per annum and were to be redeemed in 18 unequal installments on March 31 of each year, from March 31, 2005 to March 31, 2022.

On January 5, 2009, British Energy notified bondholders of its intention to redeem the Bonds early on February 10, 2009. The Bonds were redeemed on February 10, 2009 and the early redemption was financed by a contemporaneous loan facility from Lake Acquisitions with the same amortization schedule and the same maturity date as the Bonds.

#### Pension

British Energy operates two separate defined benefit pension arrangements in the UK within the Electricity Supply Pension Scheme (ESPS): the British Energy Generation Group (BEGG) for the majority of employees and the British Energy Combined Group (BECG) for the employees at Eggborough power station. The ESPS is a defined benefit scheme, which is externally funded. Each pension group that participates in the ESPS is financially independent from the other groups.

The cash funding requirements of the pension schemes are determined by triennial actuarial valuations by the independent scheme actuaries. Any deficiency disclosed in the BEGG or BECG schemes following a triennial actuarial valuation will be funded by the Group. The most recent triennial valuations of the BEGG and BECG schemes were carried out as at March 31, 2007 and have been agreed by the Trustees. The combined deficit for both schemes as at March 31, 2007 was £177 million.

In line with UK law, the Trustees of each pension scheme issue members with annual funding statements. These annual funding statements are prepared as at March 31 each year and the combined deficit for both pension schemes as at March 31, 2008 had grown to £663 million. The combined deficit has continued to grow since March 31, 2008 as a result of economic conditions.

The trustees of British Energy's pension schemes have agreed with EDF, in connection with the acquisition, to put in place a revised pension deficit payment plan until December 31, 2013, effective from April 1, 2009. Such plan provided for a range of provisions including accelerated deficit funding, maintenance of specified covenant strength following the transaction, triggers for new valuations, future pensions strategy of British Energy as an employer and other matters. The trustees have confirmed that as a direct result of the acquisition of British Energy by Lake Acquisitions, they have no plans to seek contributions above the levels which EDF has agreed to provide or to call for any actuarial valuation earlier than agreed with EDF.

#### **6.3.1.1.4** INTEGRATION

#### 6.3.1.1.4.1 INTEGRATION PLAN

In the latter part of 2008, EDF Energy commenced the process of planning for the integration of the British Energy's business, in anticipation of the conclusion of the acquisition process.

An integration project team has been created, lead by the Chief Executive of EDF Energy, to mobilize the planning, project governance and benefits tracking for both pre and post acquisition activities. This includes the clear identification and reporting of synergies and other benefits from optimizing business performance, and the development of new build nuclear assets in the United Kingdom, and the development of EDF's group capability to support international nuclear development more generally.

#### 6.3.1.1.4.2 SYNERGIES

EDF expects the acquisition of British Energy to generate synergies positively impacting EBITDA of €200 million three years after the realization date of the acquisition. The potential synergies have been calculated on the basis of the EDF group acquiring and retaining 100% ownership of British Energy, and the de-listing of British Energy. The potential synergies have been calculated on the basis of a number of subjective assumptions made by EDF, for example in relation to potential procurement costs and other areas of overlap, future retail customer numbers and profits wholesale power sales.

Revenue synergies will result from enhanced existing trading operations and access to an improved credit rating for British Energy operations, as well as an ability to grow the end customer base of the Combined UK Group.

EDF recognizes the expertise and commitment of the British Energy employees who operate and maintain the existing generating stations. EDF will support, maintain and invest in the existing generating stations and their employees, as well as seek to utilize British Energy as a platform for New Nuclear Build (see section 6.3.1.1.5 ("New Nuclear")). There is a good fit between the EDF Energy Group, in which the vast majority of employees are engaged in customer service and distribution network operations, and British Energy, which is primarily involved in generation. Overlap in some areas in the two organizations creates the opportunity for best practice and cost synergies, which would be realized as EDF and British Energy work together to shape the organization of the Combined UK Group.

In addition to the synergies that will enhance the performance and continued operation of British Energy's existing nuclear fleet, relating to the existing operations, EDF also expects significant synergies in New Nuclear Build, as British Energy and EDF employees have extensive experience in the nuclear industry and the Enlarged Group will be in a position to harness cost and investment savings as a result of economies of scale and standardization.

#### 6.3.1.1.4.3 Power purchase agreement with EDF Energy PLC

The proposed arrangements for the sale of power from British Energy to EDF Energy are based on the following:

- EDF Energy acting as the route to market for all of British Energy's nuclear generation within an agreed trading horizon so as to maximize the synergies;
- These transactions being done on the basis of agreed and specified market indices for defined traded products so as to provide transparency of the revenues being passed to British Energy.

#### **6.3.1.1.5** NEW NUCLEAR

#### **6.3.1.1.5.1 O**BJECTIVE AND SITES

EDF's group has an ambition to build and operate 4 new EPR plants in the UK, with the first plant to start by the end of 2017. The EPR technology is the same technology being deployed for the new build of a nuclear power station at Flamanville in France, and will allow the efficiencies that come with the standardization of design for the construction and operation of a series of plants. Together with Areva, EDF has already submitted an application to the relevant UK authorities for certification of an EPR plant model for use in the UK. Additionally, EDF has already ordered critical components required to build the first two EPRs in the UK.

EDF Development Company Limited, a wholly owned subsidiary of EDF International established during 2008, acquired land at Hinkley Point and at Wylfa beside existing nuclear facilities, with the intention of using the land for the construction of new nuclear power stations.

With the acquisition of British Energy, EDF now also has access to sites owned by British Energy adjacent to existing power plants, together with land at Bradwell, for the purposes of developing new nuclear. British Energy has stated that the eight sites it owns are among the best potential candidates for the construction of new nuclear power stations. Their four priority sites for the first new build units are in the south of England – at Sizewell, Hinkley Point, Dungeness and Bradwell. They have commissioned a range of surveys to gather data for environmental impact assessment at these four locations and in November 2007 they secured transmission connection and construction agreements with the National Grid for a total of approximately 10.8 GW gross capacity from 2016 at these sites. EDF has also identified these sites as suitable for New Nuclear Build.

The use of EDF and British Energy sites for new nuclear build remains subject to the Government's Strategic Siting Assessment and the granting of appropriate planning authorizations.

#### 6.3.1.1.5.2 SITES AGREEMENTS

EDF, Lake Acquisitions and the Secretary of State have entered into an undertaking which requires EDF, in certain circumstances, to dispose of specified areas of land in the vicinity of existing nuclear sites owned at Bradwell and adjacent to existing stations at one of Heysham or Dungeness, and if not otherwise required under the Simultaneous Marketing Agreement (see next paragraph), land owned by EDF at Wylfa (see below).

EDF and EDF Development Company Limited ("EDCL") have also agreed to enter into an agreement (the Simultaneous Marketing Agreement) with the Nuclear Decommissioning Authority (the "NDA") for the simultaneous marketing through an auction of EDCL's land at Wylfa and the NDA's land at Wylfa, Bradwell and Oldbury.

EDF's objective in entering into these arrangements is to ensure that it will, following the acquisition of British Energy, have access to sites suitable for the construction of four EPR-type nuclear power stations in the UK. The Sites Undertaking is designed to facilitate the entry of other nuclear power generators in the UK, which will help achieve HM Government's policy to promote the emergence of more than one nuclear power generator or operator in the UK.

#### **6.3.1.2 GERMANY - ENBW**

As of the date of the filing of this Document de Référence, EDF owned 45.01% of EnBW's share capital and, excluding treasury shares, which have no voting rights, 46.07% of EnBW's voting rights.

In 2008, the EnBW group recorded sales of €16.3 billion and EBITDA¹ of €2.5 billion (source: EnBW 2008 annual report). EnBW was consolidated by proportional integration at 46.07% in the consolidated financial statements of the EDF group as of December 31, 2008.

EnBW, whose shares are traded on the Frankfurt stock exchange and the Stuttgart stock exchange, publishes certain information (including its annual report) available on its website at www.enbw.com. EnBW ranks third among German energy companies after E.ON and RWE in terms of sales and number of customers. Furthermore, it is the top electricity company in its historical development area, Baden-Württemberg. Its business includes generation, transmission, distribution, supply and electricity trading. EnBW also operates in the gas fields (transmission, distribution, supply and trading), energy-related services. EnBW holds equity participations in several local utilities in Baden-Württemberg. Elsewhere in Germany, EnBW also holds interests in local utilities and has developed, on a national scale, an independent electricity retailer, Yello, the electricity supplier in Germany which has the highest number of customers outside its historical area.

#### 6.3.1.2.1 STRATEGIC INTEREST OF EDF'S STAKE IN ENBW

EDF's stake in EnBW followed a long collaboration between the two companies, especially in the technical field and that of electricity exchanges with Baden-Württemberg. EnBW has a strong presence in this region, which is also one of the most developed in Europe, with a population of 11 million and dynamic companies focused on exports.

EnBW's Yello brand gives the company a strong marketing advantage with its residential and small business customer base, which has been open to competition since 1998, and an expertise which EDF may use to its advantage. EDF's holding in EnBW also allows it to service major multi-site customers of both companies.

EnBW's equity holdings in the "Stadtwerke" (see section 6.3.1.2.3.1 ("Electricity business – Supply")) in Baden-Württemberg, as well as in Düsseldorf and in Saxony in eastern Germany allow it to operate outside of its histori-

As well, EnBW's gas business, with sales of €2.9 billion (source: EnBW 2008 annual report) in the leading gas market in Europe, is a major advantage for the EDF group's gas strategy.

Moreover, EDF estimates that a presence in Germany, the largest market in Europe in terms of numbers of customers and electricity consumed, is essential from the perspective of a European energy market.

The EDF group's strategic interest in Germany is also based on the size of the "German" marketplace encompassing Germany, Austria and, to a certain extent, Switzerland, which gives access to almost 90 million consumers. This regional marketplace may be considered a single market as interconnections between the countries concerned are highly developed and transmission lines are not saturated, which leads to flexibility in exchanges. Wholesale prices for different products (base-load, peak-load and forward spot markets) are also globally the same in the three countries. This network occupies a key position in Europe and is likely in the medium term to create, with France and the Benelux countries, a "regional market", if network congestion is

The interest of a presence in Germany is reinforced by growth opportunities in the countries of central and eastern Europe since the enlargement of

<sup>1</sup> EnBW's 2008 annual report defines EBITDA as "earnings before interest, taxes, depreciation and amortization".

the European Union. EnBW is present in these markets through a number of mainly minority shareholdings in electricity generation and distribution companies, especially in Switzerland, Austria, Poland and Hungary, and intends to develop in central and eastern Europe.

Finally, the geographical proximity of EDF and EnBW and the similarity of the sectors in which they operate (especially the large proportion of nuclear energy generated by the two companies) enable the sharing of expertise and the realization of synergies.

#### 6.3.1.2.2 DETAIL OF EDF'S HOLDING IN ENBW

#### EnBW shareholders

As of the date of the filing of this Document de Référence, EDF held 45.01% of EnBW's share capital and, excluding treasury shares that have no voting rights, 46.07% of EnBW's voting rights. With EDF, the other main EnBW shareholder is OEW, a group of local authorities in Baden-Württemberg, which held, like EDF, 45.01% of EnBW's share capital and 46.07% of EnBW's voting rights as of the date of the filing of this Document de Référence. EDF and OEW entered into a shareholders' agreement that gives them joint control of the company (see below).

As of the date of the filing of this Document de Référence, the remaining balance of EnBW's share capital is held as follows: 5.82% by different municipalities and municipality federations in Baden-Württemberg, 1.86% by the general public and 2.30% as treasury stock by EnBW (source: EnBW 2008 annual report).

#### Shareholders' agreement

EDF and OEW entered into a shareholders' agreement on July 26, 2000, under the terms of which they agreed to hold, jointly and in parity, the majority of EnBW's share capital and to control the company jointly. The agreement provides that EnBW must be EDF's exclusive vehicle in Germany for any investment relating to the electricity, gas and waste businesses, unless OEW or EnBW declines the proposed investment. Furthermore, the agreement distinguishes between two categories of shares:

- shares subject to the shareholders' agreement, which represent 50.01% of EnBW's share capital (25.005% for each party) (the "Shares subject to the Shareholder's Agreement"); and
- shares not subject to the shareholders' agreement, which represent the balance of the holdings of each party.

With regard to Shares subject to the Shareholder's Agreement, the agreement provides that since January 1, 2005 and until December 31, 2011, OEW is required to obtain EDF's prior agreement to sell its Shares subject to the Shareholder's Agreement to a third party that is not part of OEW.

However, OEW has:

- a put option against EDF for some or all of its Shares subject to the Shareholder's Agreement (25.005%), which may be exercised at any time between January 1, 2005 and December 31, 2011 at a price of €37.14 per share. The EDF group has recorded an amount of €2,322 million in its off-balance sheet commitments at December 31, 2008 (see note 25.5 to the consolidated financial statements as of December 31, 2008);
- a preemption right on Shares subject to the Shareholder's Agreement held by EDF; and
- the right to oppose a sale by EDF of its Shares subject to the Shareholder's Agreement if the third party buyer is not ready to purchase OEW's shares at the same price (tag-along clause).

Regarding shares which are not subject to the Shareholder's Agreement, the agreement provides for a reciprocal preemption right mechanism.

EDF and OEW are required to uniformly exercise their voting rights at Shareholders' meetings and to adopt a uniform position on decisions examined by the Supervisory board and are also required to adopt a common position on any decision concerning EnBW that is considered important by at least one party and to uphold it in respect of the company.

To this end, EDF and OEW have formed, in accordance with the stipulations of the shareholders' agreement, a shareholders' committee (led by EDF) allowing them to adopt common positions. However, EDF has a decisive vote for decisions relating to the implementation of the EnBW's medium term development plan ("plan de développement à moyen terme") as drawn up by the parties.

Out of the 20 members on the Supervisory board, EDF has four representatives and OEW has three (including the Chairman, who has the decisive vote). Two members were appointed by the Shareholders' Meeting of EnBW (one suggested by OEW and the other by EDF), ten members were appointed by EnBW's employees and the remaining member is appointed jointly by EDF and OEW.

One of the members of EnBW's Executive Board, currently composed of five members, is appointed by EDF.

The agreement's earliest expiry date is December 31, 2011, but the agreement will remain in force for as long as EDF and OEW own: jointly, the majority of the share capital; and individually, at least 17% of the share capital.

#### Other shareholders' agreements

OEW had a put option against EDF for some or all of the shares it purchased from Deutsche Bank and HSBC Trinkhaus & Burkhardt KgaA on January 28, 2005 (5.94% of EnBW's share capital). This option was exercisable at any time from January 28, 2005 to November 30, 2006, but was not exercised by OEW. From December 1, 2006 until December 31, 2011, in the event that OEW sells the aforementioned shares to a third party, EDF will have a right of preemption.

#### **Evolution of EnBW shareholding**

For EDF, an ongoing quality partnership with OEW is a major objective. On the occasion of its return to parity with EDF in the capital of EnBW in April 2005, OEW expressed its objective of holding its shares until at least 2011. However, this situation could change before 2011 as OEW may exercise its sale option relating to Shares subject to the Shareholders' Agreement before this date.

#### **Evolution of market prices in Germany**

In 2008, in Germany as in France, there was a noticeable rise in electricity spot prices compared to 2007. German spot prices were established, on average in 2008, at 65.8 euros/MWh baseload and 88.1 euros/MWh peakload, a rise of 73% (+27.8 euros/MWh) and 57% (+31.9 euros/MWh) respectively compared to 2007.

Following a significant rise during the first half of 2008, forward electricity prices decreased noticeably during the second half of the year and returned to levels similar to those recorded at the end of 2007. However, prices have increased on average compared to 2007. The German annual contract for 2009 has been negotiated on average at 70.1 euros/MWh, representing an increase of 25% (+14.2 euros/MWh from the 2008 annual contract price quoted in 2007).

#### 6.3.1.2.3 DETAIL OF ENBW'S BUSINESS

The table below sets forth key figures for the EnBW group for the last two financial years (source: EnBW 2008 annual report):

Financial Year as of Financial Year a
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	12.31.2008	12.31.2007
Sales (€ billions) <sup>(1)</sup>	16.31	14.71
Of which electricity	12.74	11.54
Of which gas	2.88	2.48
Electricity sales (TWh) <sup>(2)</sup>	130.5	139.5
Gas sales (TWh)	69.8	75.2
Energy customers (millions)	6	6
Employees	20,501	20,265

<sup>(1)</sup> Net sales, after deduction of taxes on electricity and gas.

#### 6.3.1.2.3.1 ELECTRICITY BUSINESSES

#### Generation

In 2008, sales of electricity by the EnBW group (including the net volumes traded and all holdings) amounted to 130.5 TWh. Its installed capacity is 15.000 MW and is broken down as follows:

(MW)*	Capacities
Nuclear (including EDF contracts)	4,846
Classical Fossil-fired	6,585
Hydropower	3,472
Other renewable energies	97
TOTAL	15,000

<sup>\*</sup> Gross data, EnBW group consolidated figures including participations (Source: EnBW 2008 annual report).

EnBW's generation assets in Germany are mainly located in Baden-Württemberg. They are characterized by their well balanced and relatively low carbon dioxide emissions generation mix, compared to other energy producers in Germany. Baseload generation is provided by nuclear power and hydropower, mid-merit generation is provided by coal-fired power plants and peak-load generation is provided by gas-and oil-fired power plants, as

well as pumping stations. Overall, fossil-fired and hydropower means intended to meet peak demand are adequate, even allowing peak energy to be sold on the market.

The following table sets forth electricity supplies, of a total of 130.5 TWh, by type of primary energy used, obtained on the basis of the EnBW group's consolidated data, including subsidiaries:

Coal, gas, oil	14.2%
Nuclear energy	27.7%
Hydropower and other renewable energies (*)	20.2%
Others (**)	37.9%

<sup>\*</sup> According to paragraph 42 of the German Law of July 7, 2005 concerning electricity and gas.

<sup>(2)</sup> Includes sales of electricity by companies where EnBW has (i) fully consolidated majority holdings for which the volume of sales is taken into account at 100%, and (ii) proportionally consolidated minority holdings for which the volume of sales is taken into account according to the percentage of the stake.

<sup>\*\*</sup> Undetermined energy source, most of this volume being provided by trading. (source: EnBW 2008 annual report)

Through its own generation, long-term supply contracts and its holdings in power plants, EnBW satisfies 51% of the EnBW group's requirements, i.e., 66.6 TWh produced out of 130.5 TWh sold in 2008 (Source: EnBW 2008 annual report).

#### Investments in production capacity

EnBW invested in the renewal and the improvement of its capacity to produce electricity.

In December 2006, EnBW thus decided to go ahead with the construction of a supercritical coal-fired power plant with a gross capacity exceeding 900 MW in Karlsruhe, the expected output of which exceeds 45%. The investment is greater than €1 billion. Work commenced at the beginning of 2008 with connection to the network planned for the end of 2011.

In December 2007, EnBW and Dow Chemical signed a Memorandum of Understanding (MoU) for the constitution of a joint venture in order to construct a 800 MW coal-fired power plant on the Stade site in Lower Saxony, and renovate the 200 MW cogeneration unit. EnBW is contributing to the study concerning the 900 MW supercritical coal-fired power plant for the company Grosskraftwerk Mannheim AG, 32%-owned by EnBW. The study for the construction of a gas-fired power plant at Karlsruhe is ongoing.

EnBW also entered into a supply agreement for a 20-year period with the EVONIK generator (located in the Ruhr region), which, as from 2010, will give to EnBW beneficial rights to 250 MW.

Extension projects for hydropower sites are in progress or in study:

- extension of the Rheinfelden hydropower plant which should be put into service in 2010 (increase in capacity from 26 MW to 100 MW);
- addition of a fifth turbine with a capacity of 38 MW at the Iffezheim power plant, which should be put into service in 2011 (direction by EnBW, participation from EDF);
- addition of a fifth turbine with a capacity of 28 MW at the Gambsheim power plant, work on which should commence in 2010 (direction by EDF, participation from EnBW).

In May 2008, EnBW acquired two project development companies (EOS Offshore AG and Offshore Ostsee Wind AG), which hold the rights to offshore wind energy projects in the Baltic Sea and the North Sea for a total of 1200 MW, to be constructed by 2012. An initial project in the Baltic Sea of approximately 50 MW was launched at the end of 2008.

Nuclear power represents 32% of EnBW's installed capacity (which includes power supplied by EDF under energy supply contracts). If the expected exit from nuclear power were to occur, this would force EnBW to replace approximately 4,000 MW of installed capacity, excluding EDF contracts, by 2022.

The nuclear power station at Obrigheim (net capacity of 340 MW) was shut down in May 2005 and its decommissioning commenced in October 2008.

The schedule for closing EnBW's nuclear power plants as of the date hereof is set forth in the table below:

Nuclear Plant	Commissioning	Installed Capacity (MW)	Forecast Closure
Neckarwestheim 1	1976	633(*)	2010(**)
Philippsburg 1	1980	890	2012
Philippsburg 2	1985	1,392	2018
Neckarwestheim 2	1989	1,096(*)	2022(**)

Corresponds to the EnBW quota in the power plant.

The President Minister of the Land of Baden-Württemberg repeatedly took a position in support of the prolongation of nuclear power, particularly of the Neckarwestheim 1 plant. In this context, EnBW also declared that it supported the idea of an update on the consensus relating to the end of the nuclear power, and at the end of 2006 filed an official request for authorization to transfer production volumes from unit 2 to unit 1 of the Neckarwestheim power plant. In June 2008, the German Minister for the Environment rejected EnBW's request to extend the operation of unit 1 until 2017. EnBW has appealed before the administrative court of Mannheim against this decision.

Future costs for the elimination of irradiated fuel and operational waste as well as the shut-down and decommissioning of nuclear power plants are estimated by EnBW to represent €4,883 million on a basis updated at a nominal rate of 5.5%, integrated into EnBW's accounts as at December 31, 2008. The calculation of these provisions is based on regulatory obligations and the measures of the operating authorizations.

In December 2008, E.ON and EnBW signed an agreement for the sale to EnBW of E.ON's participation in the brown coal-fired power plant at Lippendorf, which represents access to a capacity of 446 MW, and the coalfired power plant at Bexbach (79 MW).

In 2008, EnBW sold 130.5 TWh of electricity (including trading business and participations) to approximately 6 million customers ultimately (source: EnBW 2008 annual report).

The EnBW group markets electricity through its subsidiaries EnBW Vertriebsund Servicegesellschaft GmbH, wholly-owned, EnBW Ostwürttemberg Donau-Ries AG, 99.73%-owned and Energiedienst Holding AG, a 81.72%-owned subsidiary, operating in Baden-Württemberg and Switzerland (source: EnBW 2008 annual report). EnBW also markets through several majority holdings, including ENSO (Energie Sachsen Ost AG) in Land Sachsen (50.10%-owned) and Stadtwerke Düsseldorf in North Rhine Westphalie (54.95%).

EnBW has a 15.07% stake in MVV (MVV Energie AG), which is a major electricity supplier in the Mannheim region. EnBW has no significant influence on the company (EnBW is not represented on its Supervisory board). MVV is not a direct or indirect supply channel for EnBW.

Outside Baden-Württemberg, supply to residential and small business customers are mainly provided by the company Yello Strom GmbH. Yello has over 1.4 million customers throughout the German market (source: Yello website). Establishing the brand was an expensive process with high fixed costs and low selling prices, but, since 2004, Yello has made a recorded profit before tax due to a significant reduction in its costs and to the regionalization of its tariffs. In September 2007, Yello entered the Swedish market to pursue the development of the brand.

In 2008, an upgrading of the competition on the German electricity market was observed, with the development of new competitors on the B2C (business to consumer) market and competitive offers of the German major competitors on the B2B market (business to business).

<sup>\*\*</sup> This calendar does not take into account the prolongation of the operating life of unit 1 at the Neckarwestheim power plant requested by EnBW at the end of 2006.

In order to face this competition, EnBW is engaged in a multi-brand approach: on the B2C with the EnBW and Yello brands, together with Naturenergie (the domestic supply brand for the energy produced from renewable energies). On the B2B market, EnBW is active with the EnBW and Watt (subsidiary specialized in the intermediary and small accounts without Baden-Württemberg) brands.

Moreover, EnBW pursue its strategy to propose different services in order to retain and gain new clients. In this context, EnBW and Yello launched a pilot project of intelligent meters on the market B2C allowing to follow the consumption of electricity on Internet and opening propects of new product and service development. Since October 2008, EnBW has offered this meter to all of its customers and plans to install 45,000 over the next three years.

On July 1, 2008, EnBW increased its baseload electricity tariff "EnBW Komfort" by 4.9%.

#### **Transmission - Distribution**

EnBW manages one of the four balance areas in Germany and is thus the only electricity transmission system operator in Baden-Württemberg. In its area, EnBW is responsible for providing stability and managing the very high voltage transmission network, in addition to interconnections with other networks.

EnBW owns the majority of the high and medium voltage network in its historical area and is also very active in distribution. EnBW has eight regional centers that operate distribution networks in Baden-Württemberg under concession agreements. EnBW has entered into more than 1,000 concession agreements, including approximately 750 agreements directly with municipalities, with the balance entered into indirectly through subsidiaries or holdings.

EnBW also holds approximately 50 stakes in Stadtwerke and municipal corporations that operate distribution networks, which means it can operate in areas where it has no direct distribution concessions.

At the beginning of 2008, the structure of the ENSO group was simplified by merging its electricity and gas subsidiaries ENSO Strom AG and ENSO Erdgas GmbH into ENSO Energie Sachsen Ost AG and merging its subsidiaries ENSO Strom Netz GmbH and ENSO Erdgas Netz GmbH into ENSO Netz GmbH. EnBW now holds (via GESO) 50.10% of the company ENSO Energie Sachsen Ost AG.

As of the date of the filing of the present Document de Référence, EnBW holds a 54.95% stake in the share capital of the Düsseldorf Stadtwerke AG, ("SWD") located in the center of the area where its competitor, RWE, operates. In December 2005 City of Düsseldorf's exercise of one put option granted by EnBW on a 25.05% stake in the share capital of SWD, allowed EnBW to take control of SWD in March 2006, after the European Commission consented to this acquisition. The city of Düsseldorf also holds a second put option on EnBW, also on 25.05% of SWD's share capital. The exercise period of the second put option began on January 1, 2005 and was to expire on December 31, 2008. EnBW could extend these exercise periods, by one-year periods, upon written notice sent no later than October 31st of the year in which the exercise period expires. The exercise period was indeed extended until December 31, 2009. As of December 31, 2008, the exercise price of the second put option was accounted for as €261.5 million in the other debts of EnBW's balance sheet (source: EnBW).

In 2008, SWD acquired 49.9% of Stadtwerke Hilden and concluded a partnership with the latter in order to optimize their purchases of energy and materials.

The table below illustrates the size of the EnBW network:

#### Length of the EnBW group network (km)

Very high voltage:	
380 kV	1,994
220 kV	2,055
High voltage:	
110 kV	9,801
Medium voltage:	
30, 20 and 10 kV	49,324
Low voltage:	
0.4 kV	104,406

(Source: EnBW 2008 annual report)

Like German distribution networks in general, the EnBW distribution network is characterized by a level of quality of service that is among the best in Europe.

#### EnBW owns the transmission network

EnBW Transportnetze AG (EnBW TNG) and swissgrid SA have formed the joint company Central European System Operation Coordinator AG (CESOC) for the coordination of their transmission networks, with a view to improving supply safety and operation of their Central European networks.

EnBW TNG and the other transmission system operators RTE-EDF Transport, Elia, TenneT, E.ON Netz, RWE TSO and Cegedel Net have set up the joint cross-border services company CASC-CWE (Capacity Allocation Service Company for the Central West-European Electricity market), the objective of which is to implement and operate services for the yearly and monthly allocation of power transmission capacity on the common borders between the five countries, based on standardized systems and rules. Clearance from the European Commission was obtained on August 14, 2008, thus opening the way for this important leap towards integrating the five electricity markets into a regional electricity market for Central-West Europe.

#### The distribution networks belong to it for the duration of the concessions

Networks granted under a concession are accounted for as tangible assets in EnBW's balance sheet. Concessions held by utility companies in which EnBW has a minority stake are shown on the balance sheet of such utility company. Where EnBW has a majority stake, this concession appears in the EnBW group accounts.

Most of the concession agreements entered into by EnBW must be renewed before 2012. The company has prepared itself for these deadlines and several years ago drew up a structured action plan consisting of various measures: situation analysis by municipality, definition with the associations of the municipalities of Baden-Wurtemberg of a standard contract for concessions, allocation of special investment budget for concessions, etc. Thus, in 2008, EnBW renewed 159 contracts of concessions concerning distribution networks of electricity.

The non-renewal of a concession does not necessarily mean that EnBW ceases to operate in the municipality concerned. Indeed, a municipality that does not renew its concession may create a *Stadtwerke* and allow EnBW to participate in its share capital, which would allow EnBW to continue to secure the related area. If a concession is lost, EnBW must sell the network to its competitors or to Stadtwerke at market price ("Ertragswert"). If the non-renewed concession is granted to a competitor, EnBW does not necessarily lose its customers as they have sales contracts with EnBW. However, the "new" network operator will have a strong interest in acquiring these customers.

EnBW aims to increase its presence in the distribution business outside Baden-Württemberg by purchasing stakes in regional utility companies.

#### **Network access tariffs**

Following the implementation in July 2005 of a new law on energy and the creation of a regulatory entity (the Bundesnetzagentur - BnetzA), the access tariffs were reduced for transporters and distributors in 2006. EnBW was compelled in 2006 to reduce its tariffs by 8% for its electricity transmission network, 14% for its electricity supply network and 17% for its gas supply network, compared to the tariffs requested by EnBW. The important competitors of EnBW were also compelled to impose significant reductions. At the beginning of 2008, a new decrease in tariffs for the access to the electricity transmission and supply networks of 11% compared to the 2007 tariffs was notified to EnBW by the regulator.

In September 2007, Germany decided to pass from a control of the network access charges cost based to the incentive regulation of the electricity and gas networks from January 1, 2009. The regulation Anreizregulierungsverordnung (AregV) of October 29, 2007 schedules, for the electricity two periods of 5-year control (2009-2013 and 2014-2018) and, for the gas, a first period of 4 years, then a second of 5 years (2009-2012 and 2013-2017).

In July 2008, the BNetzA made a decision with respect to the network assets returns rate, which for the first incentive regulation period, for both electricity and gas, will be 9.29% for installations completed since 2006 and 7.56% for installations built until 2005.

EnBW has received the regulator's notifications fixing network access costs for 2009. The managers of the gas networks are authorized to increase their transport tariffs by 2% in 2009 compared with 2008. The majority of electricity distribution network managers are authorized to increase their transport tariffs by between 3% and 4% and the manager of the Bade-Wurtemberg transmission network may increase them by 12%.

#### Trading activity

EnBW Trading GmbH is a wholly-owned subsidiary of EnBW, responsible for managing the upstream-downstream balance, i.e., the balance between different means of sourcing (including its own generation capacity) and demand for electricity. It is responsible for managing generation capacity, fuel purchases and the management of associated risks, as well as EnBW's supply contracts. It also deals with CO<sub>2</sub> quota transactions and trades on

EnBW Trading operates on the various European wholesale markets and energy stock markets.

#### 6.3.1.2.3.2 GAS BUSINESS

At the end of 2008, the EnBW group had approximately 530,000 gas customers. In 2008, EnBW sold 69.8 TWh of gas and recorded sales of €2.88 billion (source: EnBW 2008 annual report).

#### Transmission and storage

In the midstream sector, EnBW operates mainly through Gasversorgung Süddeutschland GmbH (GVS) and EnBW Trading. GVS, of which EnBW owns, in parity with ENI, 50% of the share capital, is one of the largest regional German gas transportation companies and has a 1,892 km network of gas pipelines and 90 million cubic meters of storage capacity (mainly in Baden-Württemberg). GVS sells gas almost exclusively to redistributors and its only direct customers are industrial.

GVS is mainly supplied by E.ON Ruhrgas, but also by Wingas, a joint venture between Gazprom and Wintershall, which is wholly held by BASF. Since 2004, ENI has also provided gas to GVS.

There is an upgrading of the competition on the German gas market, leading to the necessity of the access to capacities of gas at competitive prices. In this context, EnBW's objective is to develop its midstream activities in the areas of storage, LNG and cross-border gas pipelines, which will be carried by its wholly-owned subsidiary EnBW Gas Midstream GmbH, created in 2008. EnBW also signed a Memorandum of Understanding in June 2007 with respect to a strategic partnership with 4Gas concerning the LNG LionGas terminal project in Rotterdam. This Memorandum of Understanding will enable EnBW, in the long term, to access a capacity of 3 Gm3 of natural gas.

EDF and EnBW executed agreements under which they are allowed to use salt caves in Etzel in Lower Saxony to store the natural gas and created a joint venture to this effect at the end of 2008. This storage should enter into service by 2011 and allows an effective capacity of about 0.4 Gm<sup>3</sup> (see section 6.4.2 "Natural gas businesses").

#### Distribution and supply

In Baden-Würtemburg, EnBW supplies gas to residential customers mainly through its subsidiaries EnBW Gas GmbH and ODR. EnBW Gas GmbH brings together several regional and local distribution channels (in particular Erdgas Südwest GmbH). It has a presence in Saxony and Düsseldorf through ENSO Erdgas GmbH (previously Gasversorgung Sachsen Ost GmbH) and Stadtwerke Düsseldorf respectively.

These subsidiaries, which are active in the marketing of gas, hold concessions. The gas supply concessions regulatory framework is the same as for electricity supply concessions. During 2008, EnBW renewed 62 concession contracts concerning gas distribution networks.

Competition on the gas market intensifies with the launch of a domestic offer to final clients by E.ON in January 2007 and the arrival of new competitors on the market.

Similarly to a large number of German electricity producers, EnBW has raised the price of gas for residential customers on January 1, 2008. For an average household using 20,000 kWh per year, the increase is of 6.9%, against 5.8% on average in Germany. EnBW decreased its baseload gas tariff "ErdgasPlus" by 4%. EnBW is therefore among the few energy companies that have decreased their tariffs at the beginning of 2009, while more that 50 companies have increased tariffs, by 11% on average, and by up to 21% in certain cases. In October 2007, Yello also launched a gas offer bounded for the moment to the cities of Essen in North Rhine Westphalia and Nuremberg in Bavaria, which constitute major local markets offering good conditions for the new competitors. Within the framework of the gas offer, the client benefits of the installation of an intelligent meter.

#### 6.3.1.2.3.3 ENERGY AND ENVIRONMENTAL SERVICES

Energy and environmental services include waste elimination businesses, water distribution and energy-related services for industry. EnBW's total consolidated sales in 2008 in these areas were €688 million, which is approximately equivalent to those of 2007 (source: EnBW 2008 annual report).

In December 2008, Energy Solutions GmbH ("ESG") signed a contract with the papermaker Progroup established in Eisenhüttenstadt (Brandenburg) for the construction of a cogeneration power plant, which will supply 150 MW of heat, 30 MW of electricity and approximately 1 million tons of steam from May 2011.

#### **Industry and services**

EnBW supplies energy-related services to companies through its whollyowned subsidiary ESG. ESG brings together all of EnBW's expertise in terms of energy and engineering services for industrial customers.

#### 6.3.1.2.3.4 DEVELOPMENT AREAS

Following the completion in 2006 of the cost reduction program named "Top Fit", EnBW embarked on a new 3-year program called Impuls gemeinsam besser, aiming at improving EnBW's performance in all areas.

After a trial period in 2007, the Impuls – gemeinsam besser programme continued in 2008 and will be pursued over the coming years. This program intends to optimize continuously the operational processes by a strong involvement of the operators, but also to realize quick earnings on a short term basis.

While maintaining its objective of financial discipline over the coming years, EnBW's ambition is to consolidate and develop its position as the third German energy group with a strong regional base. To this effect, EnBW's Management has stated that priority would be given to strengthening its positions in Baden-Württemberg and expanding in Germany. Furthermore, EnBW wishes to strengthen its position in central and eastern Europe. Certain growth opportunities in this region and in south Western Europe will also be explored (source: EnBW 2008 annual report).

In July 2008, EnBW acquired 26% of the share capital in EWE AG, the 5<sup>th</sup>-ranking German energy company, for a total of €2 billion. EWE is an energy provider and distributor based in Lower Saxony, sales for the 2007 financial year of which was €4.7 billion. EWE owns several businesses in Poland and Turkey, where it took over Bursagaz in October 2008. EWE chose EnBW as strategic partner in order to develop its access to electricity sourcing, its means of production currently being limited to 72 MW. EWE is also the principal shareholder of VNG (47.9%), a gas company based in Leipzig the turnover for the 2007 financial year of which was €4.2 billion. VNG owns long-term import contracts with Gazprom, a storage capacity of 2.27 billion m³, a gas transmission network well placed strategically to the east of Germany and a clientele made up of industrialists and stadtwerke. EWE itself owns a gas storage capacity of 1.3 billlion m³, efficient networks the access tariffs for which are relatively low and a strong downstream position (14.3 TWh of electricity and 37.6 TWh of gas sold in 2007 to 1 million electricity clients and 770,000 gas clients). At the date of the filing of the present Document de Référence, this acquisition is subject to the approval of the German anti-trust authorities, which have delayed their decision on the matter until June 15, 2009.

In September 2008, EnBW increased its shareholding in the Czech company Pražská energetika, a.s., via the acquisition of 14.19% of its shares by the holding company Pražská energetika Holding, a.s., which is 49%-owned by EnBW.

In November 2008, EnBW merged its Swiss-based businesses by transfering its ownership EnAlpin AG (100%) to EDH (Energiedienst Holding AG, 75.97%-owned prior to the transfer) in exchange for new shares, thus increasing its ownership of EDH to 81.72%.

#### 6.3.1.2.3.5 Synergies within the EDF group

Since the end of 2003, EDF and EnBW have embarked on a common program to create synergies. They have therefore developed approximately 40 projects.

With regards to generation, cooperation is centered on internal projects within the Group:

- Study for the construction of new EnBW fossil-fired power plants.
- In the area of hydropower, EDF and EnBW continue to cooperate in the realization of a fifth turbine in the Iffezheim power plant (increase of capacity of 38 MW) and in the construction of a new power plant at Kehl and Breisach (capacity of 4 MW).

• In the operation of nuclear power plants, benchmarks for maintenance and safety costs have been defined in order to optimize generation costs of power plants. In addition, a joint program of recruitment and training of bilingual engineers allows to strengthen the cooperation.

In the sales and marketing field, EDF and EnBW are implementing a common strategy with regards to certain major industrial customers. This has allowed them to work side by side with customers and to increase sales. In the context of this strategy, EnBW has gained as new clients, the German steel producers RIVA, representing a capacity of 3,500 GWh of electricity on the 2008-2009 period.

Moreover, in some countries, such as Poland, the EnBW and EDF sales teams have been merged. In the research and development field, in particular through the EIFER (the European Institute of Energy Research, created by EDF in collaboration with the Karlsruhe University), EDF and EnBW entered into an agreement in January 2003 regarding renewable energy, distributed generation and fuel cell batteries.

In the gas business, relationships between EDF and EnBW have continued to grow. Joint operations have already been carried out with regards to supply and transmission. EDF and EnBW executed together agreements for storage capacities of natural gas in Etzel in the north of Germany.

#### **6.3.1.2.4** THE BOARD OF ENBW

- Hans-Peter Villis, Chairman of the Board since October 1, 2007;
- Dr. Bernhard Beck LL.M, member of the Board and Chief Personnel Officer since October 1, 2002;
- Christian Buchel was appointed member of the Board and Chief Operating Officer as from February 1, 2009;
- Dr. Rudolf Schulten was appointed member of the Board and Chief Financial Officer on January 1, 2009;
- Dr. Hans-Josef Zimmer, member of the Board and Chief Technical Officer since October 1, 2007.

#### 6.3.1.3 ITALY

The EDF group operates in Italy mainly through its shareholdings in Edison, the second operator on the Italian electricity market and third in the gas market. As of December 31, 2008, the Group held 19.36% of Edison's share capital directly (18.96% of its economic interests after accounting for shares in the employees savings plan), and 50% of the share capital of Transalpina di Energy (TdE), which in turn holds 61.28% of Edison's share capital (60% of its economic interests). Therefore EDF's direct and indirect stake in Edison is 50% of the voting shares or 48.96% of the economic interests.

The agreements entered into during the year 2005 by the Group with A2A S. A. (formely AEM S.p.A.) provided for the joint takeover of Edison by EDF and A2A S. A. (formely AEM S.p.A.). The terms and conditions of this takeover are described in section 6.3.1.3.1.2, "Joint takeover of Edison by EDF and A2A S. A.".

Furthermore, the EDF group operates in Italy through the following subsidiaries and shareholdings:

- Fenice: as of December 31, 2008, the Group wholly-owns Fenice, which specializes in electricity generation, supply of energy-related services, solid and liquid industrial waste treatment, and environmental activities;
- Siram: the Group holds, through Dalkia and Dalkia International, a 50% interest in Siram. Siram specializes in energy-related services to customers in the service sector, industrial companies and local authorities;

• EDF Energies Nouvelles Italia: this subsidiary (95% held) brings together EDF Energies Nouvelles' stakes in various energy projects in Italy, primarily in the area of wind energy.

Finally, EDF implements the industrial partnership agreement entered into with Enel on nuclear power (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet") for a description of the main terms of the partnership agreement Industrial Enel signed on 30 November 2007 and two Memorandum of Understanding concluded by EDF and Enel on February 24, 2009), and continues to study the provision of thermal energy in France and of counterparts that Enel could be providing in Europe. Enel, under the agreement on nuclear power, has already posted some fifty engineers under training in EDF and the site of the Flamanville 3 EPR.

Moreover, the Italian Government has strongly committed itself in favor of a return of nuclear energy in Italy. A bill to this effect is currently being analysed by the Parliament.

#### **6.3.1.3.1** EDISON

Edison is the oldest Italian electricity company. Edison is the second largest operator in the Italian electricity market (after the historical operator Enel) and the third largest operator in the gas market after ENI and Enel. In 2008, net electricity generation by Edison in Italy was 50.2 TWh, which accounted for 16.4% of net electricity generation in Italy, and gas activities, excluding stock variation, accounted for 13.5 Gm<sup>3</sup>, or 16.2%, of Italian gas demand.

In 2008, Edison generated €11,066 million of revenue and an EBITDA (margine operativo lordo) of €1,643 million (source: Edison's 2008 annual report). In EDF group's consolidated financial statements as of December 31, 2008, Edison is consolidated by proportional integration

Edison is listed on the Milan stock exchange pursuant to whose regulations it publishes a certain amount of information (in particular, its annual report) that is available on its website (www.edison.it).

#### MARKET ENVIRONMENT AND PRICE TREND

Electricity demand in Italy totaled 337.6 TWh in 2008, decreasing by -0.7% compared with 2007. Wholesale prices increased by 22.5% due to the rise in raw materials on the international markets. Nevertheless, the more significant prices fall in the French-German plate have lead to an increase in net imports in Italy (overseas net trading increased by 2.1% relative to 2007).

Net national demand of natural gas reached 83.1 Gm3 (a decrease of -0.3% compared to 2007 (source: Edison)). This slight decline is mainly due to the drop in consumption by industrial clients and CCGT gas power plants during the last months of the year, which was partially offset by the rise in consumption linked to climatic conditions

The anti-crisis decree n° 185/2008 of November 28, 2008 for the national economy was transformed into Law on January 27, 2009. Concerning the energy part, this package provides that the Ministry of Economic Development (MSE), after consultation with the Regulatory Authority (AEEG), will implement several measures to reform the electricity market including among other things the change of the wholesale electricity market, the creation of a new infra-day adjustment market, the reform of the service system. Furthermore, the MSE will promote competition between areas in which market abnormalities occur and, in consultation with the transmission system operator (Terna), could, within two years, divide the market in three macro areas. The Law also provides for the creation of social tariffs for gas, as it already exists for electricity. Finally, the Law provides for exceptional

procedures in the energy sector to accelerate the implementation of strategic projects.

#### 6.3.1.3.1.1 STRATEGIC INTEREST OF EDISON SHAREHOLDING

The Italian electricity market is, in term of consumption, the fourth largest market in the European Union with a high growth rate and price levels. The development of new generation capacities is a major challenge.

The position and ambitions for growth of Edison allow the Group to implement a balanced strategy in Italy based on Edison's ambitions to develop its electricity production facilities, its portfolio of customers and its gas **business** 

In terms of supply, Edison's goals for the coming years are to significantly develop its electricity sales to small and medium-sized companies as well as its gas sales to large industrial customers. Furthermore, Edison intends to develop a dual electricity-gas offer for its business customers in order to significantly increase its sales in these sectors.

In addition to the EDF group's strategic interest in the growth of Edison and that of the Italian electricity market, Edison's development plan provides opportunities for synergies with the EDF group in the short term notably in the fields of engineering, equipment purchases, supply to large customers' services

In the gas market, Edison offers opportunities for synergies and holds an important position in the gas component of the Group's strategy. Edison is also implementing different infrastructure projects for the delivery of natural gas to Italy. Edison plans to have independent import infrastructures permitting the delivery of gas coming from the Mediterranean and Caspian Seas for onward transportation to continental Europe. This will allow the Group to gradually reduce its reliance on the infrastructures of its main competitors. If these projects materialize, they could contribute to turning Italy into the gas transit center from South through North, creating opportunities to satisfy Group's needs in France and in Germany.

For the implementation of its natural gas business strategy, the Group can benefit from the experience that has been developed over the course of many years by Edison along the entire gas value chain, from exploration/production to direct supply of natural gas.

#### 6.3.1.3.1.2 JOINT TAKEOVER OF EDISON BY EDF AND A2A

On May 12, 2005, EDF, A2A S.A. (formerly AEM S.p.A), WGRM Holding 4 S.p.A. (a wholly-owned subsidiary of EDF) and Delmi S.p.A. (a subsidiary held at that time at 95% by A2A S.A. (formerly AEM S.p.A)) entered into a Structure Agreement and a Shareholders' Agreement governed by Italian Law, relating to the implementation of their joint takeover of Edison and the exercise of their joint control. To further this goal, they formed Transalpina di Energia S.p.A. (TdE), a jointly-held holding company in which WGRM and Delmi each hold 50% of the share capital.

A2A is an integrated Italian operator, listed on the Milan Stock exchange, active in the markets of generation, importation, supply, transmission, distribution and sales of electricity and gas to end-users. A2A results from the merger of January 1, 2008, between AEM and ASM S.p.A. (the former utility serving Brescia in Lombardy). It is currently the second-largest energy provider in Italy due to its stake in Edison's consolidation.

As at the date of the filing of the present Document de référence, Delmi is controlled by A2A, which holds 51% of its share capital and voting rights, by industrial partners holding 35% (ENIA, SEL and Dolomiti Energia) and by minority shareholders holding 14%.

#### Edison's voting rights after the exercise of warrants

On January 2, 2008, Edison disclosed that 1,094,740,583 warrants were exercised in 2007 at an exercise price of €1. (A further 91,877 warrants were not exercised by their expiration date on December 31, 2007 and were therefore cancelled.) In 2007, these warrant exercises provided Edison with an additional €1,094,740,853 of capital, bringing its total share capital to €5,291,700,671. The total number of ordinary Edison shares outstanding is now 5,181,108,251, and the number of shares without voting rights (i.e., shares for the employee savings plan) is now 110,592,420.

In December 2007, EDF (including its wholly owned WRGM subsidiary) and TdE  $\,$ (50%-owned by EDF) exercised all their Edison warrants - 281,549,617 and 210,012,399 warrants, respectively – and consequently received the same number of ordinary Edison shares with voting rights.

However, these warrant exercises did not alter Edison's governance structure, because the governance agreement with A2A S.A. (formerly AEM S.p.A) was arranged on a fully-diluted basis (i.e., accounting for the exercise of all warrants). In consistency with these agreements, after the warrant exercises were completed in December 2007, EDF group owned 50% of Edison voting rights and 48.96% of its economic interests (i.e., after accounting for the employee savings plan shares, which do not have voting rights).

#### Specific provisions of the Structure Agreement

The Structure Agreement whose provisions would stay in force until December 31, 2020, contains a provision relating to the change of control of A2A S.A. (formerly AEM S.p.A) or Delmi. In the case of a third party other than the city of Milan acquiring the control of A2A S.A. (formerly AEM S.p.A), or in the case of a third party other than A2A S.A. (formerly AEM S.p.A) appointing the majority of the members of the Board of Directors of Delmi, this provision gives EDF a call option to purchase Delmi's stake in TdE. The Structure Agreement has a similar provision as to EDF and WGRM towards A2A S.A. (formerly AEM S.p.A).

#### Joint control of Edison

The Shareholders' Agreement provides for rights and obligations of TdE shareholders, the exercise of joint control of Edison and the rights and obligations of EDF and A2A in respect of TdE and Edison.

#### TdE

The Board of Directors of TdE shall be comprised of 10 members elected by the shareholders, five appointed by EDF and five appointed by Delmi. Delmi will appoint the TdE Chief Executive Officer, and EDF will appoint the Chairman of the Board of Directors. The meetings of the Board of Directors require a quorum of eight members, and decisions are made by a qualified majority of eight members. No director holds the right to a deciding vote.

#### Edison

In accordance with the Shareholders' Agreement, the Board of Directors of Edison will be comprised of 12 members elected by the shareholders. These members will be the five directors of TdE appointed by EDF, the five directors of TdE appointed by Delmi and two independent directors, one appointed by each of EDF and Delmi. In addition, Delmi will appoint the Chairman of the Board of Directors and the Chief Financial Officer of Edison (who can also be a director), whereas EDF will appoint the Deputy Director and the Chief Operating Officer. The meetings of the Board of Directors require a quorum of 10 members and the decisions will be made by a qualified majority of 10 members. No director will hold the right to a deciding vote.

Edison's bylaws have been changed and now foresee minority shareholders can now appoint a thirteenth Board member provided that a list of candidates is presented. At the Annual General Meeting of April 2, 2008, which renewed the Board of Directors of Edison, an independent member representing minority shareholders (the group Carlo Tassara Romain Zaleski is the largest minority shareholder with approximately 10% of securities for a total of 9.34% floating) was elected, bringing to 13 the number of members of the Board. The quorum and the qualified majority remained fixed to the number of 10 members.

#### Specific provisions of the Shareholders' Agreement

The Shareholders' Agreement came into effect on September 15, 2005, and establishes the fundamental principle that the management of Edison will be determined exclusively by TdE. Consequently, EDF, WGRM, A2A S.A. (formerly AEM S.p.A), and Delmi have agreed in relation to shares of Edison that they hold, or may hold in the future, directly or through their subsidiaries:

- to exercise their right to vote (or abstain from voting or participating in Shareholders' Meetings of Edison), in accordance with the position of TdE; and
- not to use their shareholder's rights in a way which would be inconsistent with a decision made by TdE or which would be contrary to the above-mentioned principle, or in their own interests.

The Shareholders' Agreement has a minimum duration of three years (five years if Edison ceases to be listed) and is then automatically renewed for the same duration, unless terminated by one of the parties under the terms of the agreement, in which case TdE will be dissolved.

As the Shareholders' Agreement has not been terminated before March 15, 2008, it has been extended by tacit renewal from mid-September 2008 for a new three-year period.

The by-laws of TdE contain a mutual preemptive right which will apply during the life of the company, but which does not apply in the event that WGRM sells all of its holdings to EDF.

The Shareholders' Agreement will be automatically terminated if EDF, directly or indirectly through WGRM, or if A2A S.A. indirectly through Delmi, ceases to hold more than 50% of the voting rights which can be exercised at the Shareholders' Meetings of TdE or if the assets of Delmi are liquidated. EDF may also terminate the Shareholders' Agreement if A2A ceases to hold the majority of the voting rights of Delmi or ceases to appoint the majority of the members of the Board of Directors of Delmi. A2A may also terminate the Shareholders' Agreement if EDF ceases to directly hold 100% of the share capital of WGRM or if WGRM exercises any substantial activity other than the management of its holdings in TdE or Edison.

#### 6.3.1.3.1.3 Edison's business in the electricity sector

After Enel, Edison occupies the number two position in the Italian electricity generation market.

#### Generation

The Edison group's installed generation capacity amounted to 12.1 GW as of December 31, 2008 (including 50% of Edipower's installed generation capacity representing 3.8 GW) with a net electricity generation in Italy of 50.2 TWh in 2008 (including 11.8 TWh of Edipower's generation) (source: Edison).

Edison's generation capacities are mobilized mainly to meet the baseload and mid-merit electricity requirements of the Italian market. Edison has drawn upon imports and other Italian suppliers and dealers to cover the balance of its requirements (7.7 TWh in 2008).

In accordance with the agreements signed between shareholders, Edison holds, as of December 31, 2008, 50% of the capital and of the voting rights of Edipower pursuant to the Tolling Agreement (right to benefit from generation capacities at an agreed price) for the fossil-fired power plants and pursuant to a Power Purchase Agreement for hydroelectric power plants. Under these contracts, Edison will benefit from a right to 50% of Edipower's existing and future thermoelectric and hydroelectric generation capacities between January 1, 2004 and December 31, 2011. The remaining 50% is divided between Atel (20%), A2A (20%), and Iride (10%). The cocontractors are jointly committed to Edipower. If any of the parties fails

to perform its obligations, the remaining co-contractors would have to purchase a quantity of energy equal to that of the defaulting co-contractor up to its respective share.

ACEA, Rome's municipal utility, and Endesa Italia started an action against EDF before the Civil Court of Rome arguing that the takeover of Edison by EDF and A2A S.A. (formerly AEM S.p.A) led to the indirect crossing of the threshold of 30% of the capital of Edipower by public entities, which, according to ACEA and Endesa Italia, would constitute an act of unfair competition. The next hearing is expected in June 2008. (See section 20.5.2 ("Legal proceedings concerning EDF's subsidiaries" - Edison)).

Following the start-up in 2007 of the Simeri Crichi 800 MW combined-cycle gas turbine (CCGT) plant in Calabria and Edipower's 850 MW plant in Turbigo (which is 50%-owned by Edison), Edison completed in 2007 the 7,000 MW capacity increase program started in 2001. This program was one of the largest power generation capacity increase programs to take place in Europe over the past decade, and involved building eight CCG units, four of which are owned by Edipower, and connecting them to the grid.

Adapting its production capacity, Edison sold in 2008 6 CIP6 plant (370 MW) to Cofathec Servizi (a subsidiary of GDF Sueez) as well as its 70% participation in CIP6 plant of Celano (170 MW in total) to the other shareholder of the plant, Secia Energia of the Maccaferri Group.

Wind power capacities representing 10 MW have also been commissioned in 2008.

Edison's generation capacity (including its share in Edipower) in the European Union is as follows:

#### 2008 Installed Capacity of the Edison group (GW)

	Edipower			
	Edison <sup>(1)</sup>	(Edison's share 50%)	Total	%
Thermoelectric	6.6	3.4	10.0	83
Hydroelectric	1.4	0.4	1.8	14
Wind power	0.3	-	0.3	3
TOTAL	8.3	3.8	12.1	100

(1) Source: Edison

The power generated in the European Union by Edison and its share in Edipower in 2008 was broken down as follows:

#### 2008 Generation of the Edison group (TWh)

		Edipower		
	Edison <sup>(1)</sup>	(Edison's share 50%)	Total	%
Thermoelectric	34.0	10.6	44.6	89
Hydroelectric	3.9	1.2	5.1	10
Wind power	0.5	-	0.5	1
TOTAL	38.4	11.8	50.2	100

(1) Source: Edison

#### **DEVELOPMENT PROJECTS**

Since late 2007, Edison has achieved most of its goals in electricity production capacities and focuses on bolstering its position in the Italian market and expanding into other European markets such as Greece, other Mediterranean countries, and the Balkan region. Edison thus aims at increasing its capacity to 13.3 GW (including its share of Edipower's generation) by 2014, through around 800 MW of new wind energy facilities and 40 MW  $\,$ for small hydroelectric facilities – which will also allow Edison to obtain the corresponding green certificates and 1.25 GW abroad.

Edison plans to invest approximately €1 billion in renewable energy, in Italy as well as other countries, between now and 2014.

The main ongoing investment programs are the following:

• Development of new capacity in Italy.

The Edison medium term plans foresee to put into service in 2012, a new CCGT with a capacity of 800 MW in central Italy and to increase the capacity of the power of Edipower Turbigo with a new unit CCGT 400 MW in 2011.

In addition, Edison has committed to modernize and reinforce the repowering of some plants receiving CIP6/92 subsidies.

• Expansion outside Italy

The main focus areas for the company's international expansion are:

- Greece: In July 2007, Edison has created a 50/50 joint venture with the Greek company Hellenic Petroleum, which will own a common 390 MW CCGT unit in Thessaloniki already running brought by Hellenic Petroleum and one CCGT 400 MW unit under construction in Thisvi brought by Edison;
- Turkey Edison is reviewing several projects including in the hydraulic domain.

#### RENEWAL OF HYDROPOWER CONCESSIONS

Edison's and Edipower's hydroelectric assets are operated under a series of concessions granted by the Italian authorities for a limited period of time. The concessions in relation to these assets are scheduled to be renewed between 2008 and 2020.

The Law n° 266 dated December 23, 2005 ("Legge Finanziaria 2006") extended the period for hydroelectric concessions relating to "important derivations" in operation as of January 1, 2006 for a period of ten years over the expiration date. However, the Italian parliament approved a law which

specifies that the 10-year extension will not apply in the autonomous provinces of Trento and Bolzano which wished to take back possession of the facilities on their territory.

Edison created in 2008 joint ventures by transferring its ownership of the hydraulic plants with Dolomiti Energia (51%) and SEL, Società Elettrica Altoaltesina (60%) with the aim of obtaining an extension of the concessions when they expire. SEL and Dolomiti Energia are partners of A2A in Delmi and are respectively controlled by the provinces of Bolzano and Trento.

#### EXPIRY OF CIP6/92 AGREEMENTS

Edison's CIP6/92 sale agreements, entered into with GRTN, have a term of 15 years and will expire between December 2007 and 2017. These contracts constitute an important element of Edison's profitability through:

- their tariffs, which are attractive, given average market prices;
- dispatching priority to call upon power plants; and
- the existence of an additional payment over the first eight years of the

The sale in 2008 of seven plants to Cofathec and to Seci Energia brings the total capacity of Edison's plants receiving CIP6/92 subsidies is approximately 1.8 GW.

In November 2006, the AEEG (Autorita per l'Energia Elettrica e il Gas) decided to reduce, from January 1, 2007, the amount of fuel taken into account in the formula used to calculate the subsidies awarded to the producers benefiting from CIP6/92 agreements. The decision has been confirmed on January 22, 2008 by the Conseil d'Etat (Council of State) has had an impact of about 10% on the operating margin of Edison in 2008. The impact on the operating margin will gradually decrease over the next few years as CIP6/92 agreements expire.

#### Supply

In 2008, Edison sold 20% of the total net Italian electric power demand 67.2 TWh in Italy (and 0.3 TWh in export), 50.1 TWh of which was generated by Edison and 17.3 TWh was imported or purchased on the Italian wholesale market and 1.1 TWh of losses. Edison's 2007 sales break down as follows:

- 9.3 TWh sold on the markets (single-buyers<sup>1</sup>, wholesalers, and end-users);
- 40.2 TWh sold directly to end-users under long-term contracts (mainly electricity generated on a customer's site by a power plant built by Edison);
- 4.5 TWh at industrial captive customers;
- 13.1 TWh sold under CIP6/92 sales contracts; and
- 0.3 TWh of exports.

Edison's supply activity, today focused on its industrial customers and SMEs, is being developed in the segment of both business customers and residential customers. To this end, Edison launched a major campaign for its residential customers with the aim to achieve within 5 years a portfolio of one million domestic customers. The acquisition of 130,000 gas customers from AMG Palermo in 2008 will contribute to meet this goal and to strengthen the capacity of Edison to offer dual electricity and gas supplies to its domestic customers.

#### 6.3.1.3.1.4 Edison's business in the GAS SECTOR

Edison ranks third after ENI and Enel in the Italian market for the supply and marketing of gas, with a 16.2% market share in 2008 (source: Edison).

In 2008, Edison purchased 12.6 Gm³ of gas, in addition to 1.2 Gm³ from its own production capacity (of which 0.9 in Italy). Of the 12.6 Gm³ of purchases, 5.3 Gm³ (including stock variation and network losses) have been

1 Public entity purchasing electricity from CIP6/92 producers, the wholesale market and imports, in order to supply distributors for the share corresponding to the consumption of non-eligible customers and the eligible customers who have not exercised their eligibility rights.

purchased on the Italian wholesale market, and 7.6 Gm³ are imported.

In 2008, Edison consumed 8.7 Gm³ of gas to generate electricity and sold 1.3 Gm³ of gas to industrial customers, 2.6 Gm³ to small business and residential customers, 0.9 Gm³ on the wholesale market and 0.3 Gm³ outside Italy.

Following a strong increase in the prices of gas worldwide, the regulator tried to limit the increase for final customers by setting a ceiling for prices in 2005 and 2006 (resolution 248/04 et seq.). AEEG's resolution 79/07, passed with the agreement of market participants, limits the gas prices charged to small customers and ultimately established conditions that are more favorable for suppliers.

The large volume of gas consumed by Edison is due to the fact that gas is the main source of its electricity generation, as it has gradually moved away from fuel oil.

Securing gas supplies in the medium and long term is a major imperative for Edison. Hence Edison is involved in the offshore regasification terminal in Rovigo (8 Gm³ per year), which was inaugurated in October 2008, and which should be put into production mid 2009, through a joint venture with ExxonMobil (45%) and Qatar Petroleum (45%), with Edison owning 10%. The agreement entered into in May 2005 with these two partners gives Edison access to an annual volume of gas of 6.4 Gm³ over 25 years. In terms of exploration and production (E&P), Edison announced the discovery in the Sicilian Strait of a significant gas discovery of 18 billion cubic metres, with Edison holding a 40% stake (and ENI a 60% stake). Edison aims to increase the percentage of gas it produces itself from 1.5 Gm³ in 2006 to 3.1 Gm³ in 2015, so that it reaches 15% of its supply for the long-term.

Edison also announced the acquisition of the exploration, development and production rights of the Abu Qir concession, offshore Egypt, which will require for its realization investments of approximately \$1,7 billion in the next five years. The Abu Qir concession, which produces approximately 1.5 billion cubic metres of gas per year and 1.5 million barrels of oil per year, has reserves estimated at approximately 70 billion cubic metres of gas equivalent, of which about 40% is Edison's entitlement.

Furthermore, after only two months of prospecting activities on the Abu Qir concession, on March 31, 2009, Edison announced a new discovery of hydrocarbons at Abu Qir that could increase production by approximately 30% compared to the current level of production.

Moreover, Edison recently obtained the label of "Operator" in Norway, which enables it to participate in public offers for the concession and exploration of gas fields in this country.

Edison is also involved in the following gas import infrastructure projects:

- GALSI Project: A pipeline to link Algeria and Italy via Sardinia with an annual capacity form 8 Gm³. The first phase relating to the feasibility study is finished. Edison has already entered into an agreement with Sonatrach for the delivery of 2 Gm³ of gas, subject to the completion of this project. The Italian and Algerian governments signed an agreement for the building of this pipeline in November 2007. In September 2008, GALSI and Snam Rete Gas signed the final agreement of cooperation for the construction of the project. It should go into service in 2012.
- IGI Projet: A pipeline to link Greece and Italy with an annual capacity of 8 Gm³, to allow the transit of gas notably from Caspian sea countries via Turkey. The Italian, Turkish, and Greek governments signed an agreement for the building of this pipeline on July 26, 2007. IGI Poseidon SA created in June 2008 and which will complete the gas pipeline between Italy and Greece, is owned equally by Edison and the greek gas distributor Depa. The pipeline construction will start once the supply contracts are signed, and it should go into service in 2012.

In the medium term, Italy could become a gas transit country of gas from the south to the north of Europe. With this prospect, Edison is continuing its development and consolidation in gas delivery to reduce its reliance on ENI and make its prices more competitive, while helping to secure and diversify Italy's gas supply.

In addition Edison has two subterranean storage sites, Cellino and Collalto, with a total capacity of 0.3 Gm<sup>3</sup>. The development of Collalto and the new storage sites of Cotignola and Mafalda should increase the capacity to 2.2 Gm<sup>3</sup> in 2012 (including 0.3  $\mbox{Gm}^{\mbox{\tiny 3}}$  of the strategic reserves required by Italian Law).

Finally, Edison announced the acquisition of the natural gas distributor from the former municipal administration of Palermo which serves around 130,000 customers.

#### **6.3.1.3.2** FENICE

Fenice is a wholly owned EDF subsidiary that operates the electricity, heat, and compressed air production plants and associated distribution networks, along with the historically associated environmental assets, that EDF acquired from Fiat when EDF purchased Fiat's stake in Fenice. These facilities are located in Italy, Spain, and Poland. Today, Fenice focuses on supplying electricity and environmental services to manufacturing companies and public agencies, alongside with a rapid building of new co-generation facilities (combined production of electricity and heat) or trigeneration (combined production of electricity, heat and cold).

Fenice generated €611 million of sales in 2008.

#### 6.3.1.3.2.1 FENICE'S ACTIVITIES IN THE ENERGY SECTOR

Fenice operates mainly in the field of outsourced management and operation of co-generation and tri-generation plants, electricity substations, fossil-fired power plants that produce both superheated water and steam for industrial use or site heating, cold generation power plants, compressed air generation units, and internal electricity distribution units, and different energetic fluids (hot air, refrigerated air, industrial compressed air and gas).

In terms of energy assets, Fenice has on December 31, 2008, electricity generation capacities of 533 MW and heat generation capacities of 3,201 MWth.

In Italy, Fenice has 51 generation sites, among which:

- 48 with thermal power generation facilities (steam, superheated water, and hot water) of a total power of 2,796 MWth;
- 28 with electric power generation facilities of a total power of 504 MW; and
- 19 with compressed air generation power plants with a volume of 1,934 million m³/h generated in 2008;

In addition, Fenice operates and maintains, for third parties, at this date, 8 combined-cycle gas turbines including 6 in CIP6/92 for a total capacity of 500 MW and 193 MWth

At the time of the sale of Fenice to EDF, it was decided to maintain and develop industrial and commercial relations with the Fiat group. The Fiat group therefore entered into service agreements with Fenice prior to 2002 for a minimum duration of eight years, which led to the transfer of assets to Fenice. These agreements were renegotiated in end of 2006, and as a result, their duration has been extended until 2012 and new development projects have been agreed on (construction and management of three cogeneration facilities with planned starting dates on the first semester of 2009). If these agreements were not to be renewed in 2012, Fiat is committed to buy back from Fenice all of the assets used for these agreements for an amount equal to the net book value of these assets. This would

greatly compensate for the reduction in Fenice's future cash flows. The corresponding workforce would be re-transferred to Fiat.

Outside Italy, Fenice owns a subsidiary in Spain, Fenice Instalaciones Iberica, and one in Poland, Fenice Poland S.p.z.o.o. These wholly owned subsidiaries operate mainly combined power, heating, and cooling plants for third parties, and provide the associated energy and environmental services (heating and cooling systems, compressed air, industrial gases, and waste and wastewater treatment).

Since its acquisition by the EDF group, Fenice has been diversifying its customer base and sectors of activity. Fenice offers customers in the public and private industrial sector industrial cogeneration and a broad range of environmental services.

#### 6.3.1.3.2.2 OTHER FENICE BUSINESSES

Fenice is active in the environmental sector. The company builds and operates wastewater treatment plants, runs an incinerator for industrial and municipal waste, provides environmental consulting services, etc.

#### 6.3.1.4 REST OF EUROPE

#### **6.3.1.4.1** SWITZERLAND

Switzerland represents an industrial interest for the Group due to its geographic position in the center of European electricity transfers and because of its important capacities in terms of peak generation.

#### THE EDF GROUP'S ACTIVITIES IN SWITZERLAND

The Group operates in Switzerland through:

- 1. the EDF group's holdings in hydropower generation facilities on the border, which generated 0.56 TWh of energy rights for EDF in 2008;
- 2. EDF's ownership of a stake in the new Swiss energy company Alpiq Holding SA (formerly Atel Holding SA). EDF owns at end of February 2009 a shareholding of approximately 25%. EnBW holds 2.30% stake in the share capital of Alpiq Holding SA.

#### (i) Evolution of EDF's shareholding interest in Alpiq Holding SA (formerly Atel Holding SA)

In September 2005, EDF entered into a share purchase agreement concerning 17.32% of the share capital of Motor-Columbus (MC) following UBS' sale of its 55.6% stake in this company.

On this occasion, EDF entered into a consortium agreement with the other principal shareholders of Atel and MC, i.e., EOS Holding and the members of a consortium of Alemannic and Ticino minority shareholders (CMS) of Atel (with EDF, EOS Holding and CMS constituting the Consortium), as well as with Atel. EDF thus favored a solution that would allow it to protect its long-term interests without taking control of the company but through permanent shareholder rights within an enlarged holding company.

Following the definitive completion of the transfer of UBS' shareholding in Motor-Columbus to Atel and the Consortium on March 23, 2006, these latter were required to initiate a public exchange offer for the Atel shares. This mandatory offer was launched by Motor Columbus on behalf of the Consortium and Atel as a share swap offer.

In order to comply with Swiss accounting regulations on cross-held treasury shares, Atel, EDF, and some of the members of CMS agreed on February 8, 2007 to swap the Motor-Columbus shares held by Atel (36,000 cross – held treasury shares) for the Atel shares held by the other parties in the

agreement (114,444 Atel shares in all). The share swap transactions were carried out on June 29, 2007, bringing EDF's stake in Motor-Columbus from 36.94% to 37.13%, and in Atel from 1.23% to 1.13%.

The consortium agreement was amended on October 5, 2007, by agreement of the members of the Consortium to allow for the restructuring of Motor-Columbus/Atel through a voluntary share swap between Motor-Columbus shares and all Atel shares, followed by the steps necessary for Atel to obtain full control of Motor-Columbus. The consortium members also agreed to contribute all their Atel shares to the voluntary share swap.

The voluntary share swap took place between November 12, 2007, and January 10, 2008. A squeeze-out of the minority shareholders who did not contribute their Atel shares to the swap was initiated in January 2008 in accordance with Swiss stock exchange regulations. In accordance with the terms of the agreement, after the squeeze-out was completed, Atel delisted from the Swiss Exchange (SWX).

On December 18, 2008 Atel Holding and the members of Consortium have signed agreements establishing, one hand, the terms of the merger between Atel and EOS, on the other hand, the terms of the contribution by EDF of its energy rights resulting from its stake in Emosson's dam and the acquisition by EDF of the Alpiq Holding shares from CMS and lastly governance principles of the new group called "Alpiq" which starts its activity in February 2009. This operation enables EDF to own a 25% stake in the share capital of Alpiq Holding, after the capital reduction of this company, which should take place in April 2009.

The total amount of the transaction for EDF amounts to CHF 1,057 million (about €705 million)

The shareholders have approved on January 27, 2009 at an Extraordinary General Meeting the new corporate name ("Alpiq Holding SA"), the transfer of the headquarters from Olten to Neuchatel as well as the entry of new board members.

#### (ii) Description of Alpiq (formerly Atel) activities

Alpiq is a leading player on the European energy market, resulting from the consolidation of the industrial assets of ATEL Holding and of EOS Holding as well as the contribution of EDF's share in the energy rights in the Emosson's dam in Switzerland. It is an integrated electricity company of significant size in the heart of the electrical trade in Europe, active in the whole chain of businesses, production, networks, trading, marketing and displays a presence in 29 European countries.

Based on its proforma sales for 2008 as published by Alpiq (CHF 15.8 billion), the group constituted by Alpiq is the highest ranking Swiss electricity Company (129.6 TWh sold in 2008), mainly on wholesale markets and to major European customers, mainly in southern Europe and in the Eastern and Central Europe countries. Alpiq also supplies approximately 100,000 customers in north-western Switzerland. This business is based on major generation and transmission assets in Switzerland and in countries where Alpiq is developing its business. In 2008, Alpiq had a total installed capacity proportional to its holdings of 6,595 MW as follows: 3,951 MW in Switzerland (2,800 MW of hydropower, 1,145 MW of thermal power (nuclear and fossil fuel) and 6 MW of hydropower microplants), 1,735 MW in Italy, 887 MW in the PECO and 22 MW in other countries.

Alpiq continues its development in several countries in Europe, especially in Central and Eastern European countries, Italy, but also France especially with the gas-fired combined cycle power station in Bayet. Alpiq also pursues the development of its energy services both in Switzerland and in Germany through its subsidiaries AIT and GAH. In addition, Alpiq enhances the diversification of its traditional businesses by creating a new subsidiary, Alpiq Eco Services AG, which will operate in the field of energy efficiency and by increasing the investment capacity of Alpig Eco Power SA, company which aims at realizing projects in Switzerland on the use of renewable energy.

In addition, Atel (now integrated into Alpiq) initiated the process for renewing its nuclear power plant in Switzerland by submitting, on June 10, 2008, an application to the Federal Office of Energy for a general licence to build a new nuclear power station in Niederamt (Canton Solothurn), near the Gösgen. The final decision will be subject to a national referendum "votation".

- 3. a 81.72% EnBW holding as of December 31, 2008 in Energiedienst which produces and supplies run-of-river hydropower from dams on the Rhine river (6.2 TWh sold in 2008);
- 4. of the company EnAlpin, a wholly-owned subsidiary of Energiedienst, which produces and supplies run-of-river hydropower on the banks and valleys of the Rhône river.

Beyond this commercial presence and as a shareholder, the Group has decided for several years to develop its presence on the Swiss electricity market through operational cooperation with the main Swiss operators (in particular Atel, EOS).

#### **6.3.1.4.2** BENELUX

The Benelux countries constitute a consistent electricity zone with significant links with the Franco-German market place, thus presenting profitable development opportunities in electricity generation. Furthermore, Benelux countries form an important hub for the European gas market due to its numerous import and transit infrastructures and to the Zeebrugge hub<sup>1</sup>.

#### THE EDF GROUP'S ACTIVITIES IN THE BENELUX COUNTRIES

Through long-term cooperation with Electrabel in the nuclear energy field, EDF owns 50% of the Tihange 1 nuclear power plant through its whollyowned Belgian subsidiary, EDF Belgium S.A. The power attributed to EDF represents 3% of Belgium's generation capacity. Tihange 1's generation, which is attributed to EDF Belgium S.A., is sold in Belgium to a Belgian operator through a long-term agreement which expires in 2015.

The trading business of EDF Belgium S.A is oriented towards the industrial market and that of SMEs. Sales of electricity totaled 1.6 TWh in 2008 and sales of gas, started in 2007, 0.9 TWh in 2008. EDF Belgium provides electricity to 4,100 sites and gas to 490 sites.

In July 2006, EDF has entered into a partnership agreement with the Dutch company DELTA N.V. for the development and the construction of natural gas power plant of 870 MW in the southwest of the Netherlands. On March 29, 2007, EDF and Delta created a joint-venture, Sloe Centrale B.V., whose corporate purpose is the construction and operation of the new power plant. This partnership includes the sharing in half of investments, a joint operation of the facilities and the sharing in half of the electricity generated. Contracts for the refinancing by bank loans of 85% of investment costs, which will take place during the commissioning of the plant, were signed in February 2008. The plant is currently under construction and commissioning is expected to take place during the third quarter 2009.

<sup>1</sup> Gas market established at the junction point of infrastructures of transport where gas arrives from various sources offering the possibility of physical exchange of gas.

#### 6.3.1.4.3 SPAIN

• Hispaelec Energía S.A.

Hispaelec, established in 1999, a wholly-owned subsidiary of the EDF group, is involved in the supply business. It does not have its own generation capacity. Hispaelec was established as part of EDF's strategy to service its major customers in Europe. It offers customized electricity supply, advice and optimization services.

#### Elcogas

As of December 31, 2008, the EDF group owns 31.39% of the Elcogas share capital. Elcogas uses an innovative clean-coal project at Puertollano in a power plant with a gross power of 335 MW fueled, in GICC mode (coal gasification integrated in a combined cycle), through coal gasification and local petcoke. In addition to natural gas, this installation allows the use of coal and oil cokes, which produce atmospheric emissions that are far below European standards. This facility is the largest solid fuel power plant of this type in the world. In 2008, Elcogas produced 1.3 GWh, including 1.0 GWh in GICC mode.

• EDF Península Ibérica S.L.

The EDF group owns 100% of EDF Peninsula Ibérica S.L, which is intended to represent the Group on the Iberic Peninsula, provide promotion and support services to Group's subsidiaries and, if necessary, the implementation of projects in the field of electricity generation and gas production.

#### **6.3.1.4.4** AUSTRIA

Austria lies at the hub of electricity and, especially, gas interconnections of the European network. It is strongly integrated with the market in Germany and is therefore of interest to foreign investors. Hydropower plants represent 70% of Austria's fleet of generation facilities.

#### THE EDF GROUP'S ACTIVITIES IN AUSTRIA

The EDF group owns 80% (and GDF Suez 20%), of the Investment Company in Austria (Société d'Investissement en Autriche or "SIA"), which itself owns 25% plus one share of ESTAG's share capital (corresponding to a minority blocking interest in Austrian Law). The Land of Styrie owns the remaining ESTAG shares and entered into a shareholders' agreement with SIA, giving SIA greater powers than its blocking minority. ESTAG heads a group of 41 Austrian subsidiaries operating in the fields of energy, waste treatment and associated services. Centered around Styrie, the ESTAG group is developing its business in the other Austrian Lands and some neighboring countries. Its two main subsidiaries are Steweag-Steg, the main electricity distributor and retailer in the Land of Styrie, and Steierische Gas Wärme (STGW) transporter, distributor and retailer of gas and heat in the same region.

In addition, EnBW operates in Austria through:

- a minority holding in Energie-Versorgung Niederösterreich (EVN), an electricity, gas and heat transmission, supply and distribution company, in the Land of Lower Austria. EVN is held at 51% by this same Land. EVN is the top distributor-supplier in Austria in terms of number of customers; and
- electricity delivery and purchase agreements with TIWAG and VKW, two electricity transmission and distribution companies operating in the Lands of Tyrol and Vorarlberg, respectively.

#### 6.3.1.4.5 COUNTRIES IN CENTRAL AND EASTERN EUROPE

#### GROUP OPERATIONS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

The Group operates in three central and eastern European countries: Poland (electricity generation, co-generation), Hungary (co-generation, distribution), and Slovakia (distribution). Apart from EDF's shareholdings, EnBW also has minority holdings in Poland (electricity generation, co-generation and heat distribution), Hungary (electricity generation, distribution) and the Czech Republic (electricity distribution, co-generation). The EDF group also operates in these countries through its subsidiary Dalkia International, mainly in co-generation intended for major urban heating systems.

Most business expansion potential lies in upgrading existing power plants or building new plants. Opportunities also exist for privatization, especially in Poland.

Just outside the European Union, Russia is in the process of reforming its electricity sector and privatizing its electricity companies; some European companies have already made acquisitions and EDF considers opportunities to cooperate with the company Inter Rao.

#### 6.3.1.4.5.1 POLAND

#### The EDF group's activities in Poland

The Group operates through the following four main subsidiaries:

- the Group controls the EC Wybrzeze co-generator (ECW) in the Gdansk region. ECW has an installed generation capacity of 353.1 MW and 1,224.6 MWth;
- the Group controls the electricity generation company ERSA in the Rybnik region. Its installed capacity is 1,775 MW. The renewal of 4 production units of 220 MW each is planned for 2015. In this context, a European call for tender was launched in December 2008, to select the supplier of main equipment (boiler, turbine, etc.):
- the Group also controls the co-generator of the town of Krakow, ECK. ECK has an installed generation capacity of 460 MW and 1,118 MWth;
- on March 19, 2009, the EDF group signed a contract for the acquisition from the Polish Treasury Ministry of a 28.05% holding in the Polish company EC Krakow. Following this transaction, the EDF group holds 94.3% of the capital of EC Krakow. The transaction is in line with the Group's strategy of reinforcing its positions in Poland; and
- in 2008, the Group through its subsidiaries held 50% plus one of the shares of the co-generator Kogeneracja in the Wroclaw-Czechnica region (the stake as a percentage is 35.61%). Its installed generation capacity is 363 MW and 1,059 MWth. Kogeneracja owns 99.87% of the heat and power generation company, EC Zielona Gora (whose installed capacity is of 221 MW and 290 MWth).

The Polish parliament voted in June 2007 the Law ending the "PPA" (Power Purchase Agreement) (long-term contracts) according to requests from the European Commission. ECK (whose contracts were expiring in 2013) and EC Zielona Gora (whose contracts were expiring in 2024) agreed to terminate their contracts in April 2008, given the current and future market prices, the financial compensation received by EC Zielona Gora and the non-repayment of what the Commission intended to qualify for State aid (since 2004).

The impact on earnings can now be considered as broadly neutral, but slightly negative in the short term for ECK.

In respect of environmental protection, the EDF group has heavily invested in recent years to bring its facilities in compliance in Poland. He is the leader of the burning of biomass, which will reach approximately 10% of its fuel supplies by 2010.

In addition, EDF has launched in January 2008 a major organizational integration project of its subsidiaries in Poland. It aims, in particular to generate productivity gains by the pooling of support functions and by disseminating best practices within the subsidiaries. The timetable plans the pooling of resources for all subsidiaries in Poland, in 2009, in the following areas: finance, IT, procurement, human resources, maintenance and engineering.

The integration will create a single entity allowing in particular to give the Group greater visibility vis-à-vis market players and public authorities. It will also be better able to grasp development opportunities in Poland and

The restructuring of the Polish electricity sector is continuing: under the auspices of the Polish government, four integrated electricity companies were created by the clustering of public producers and distributors. Two of them will soon be introduced on the stock exchange.

#### 6.3.1.4.5.2 HUNGARY

#### The EDF group's activities in Hungary

In Hungary, the Group is developing its generation, supply and distribution businesses, through two main subsidiaries: BE ZRt and Demasz:

- BE ZRt As of December 31, 2008, EDF owned 95.57% of BE ZRt, which is based in Budapest and generates heat and electricity. BE ZRt has an installed electricity generation capacity of 410 MW and heat generation capacity of 1,466 MWth, and supplies 60% of Budapest's heat needs. Most of its electricity (1.7 TWh/yr) is sold, up to now, to a single Hungarian purchaser, Magyar Villamos Muvek Zrt. (MVM) through three power purchase agreements (PPAs) expiring in 2011, 2021, and 2024. The European Commission, by decision dated June 8, 2008, demanded the termination of Hungarian PPA on the grounds that they constitute illegal State aids. On November 10, 2008, the Hungarian Parliament passed a law declaring the termination of PPA at December 31, 2008. BE ZRt managed to negotiate a commercial contract of sales with MVM, on terms satisfactory to it, from January 1, 2009, given that the agreement will come into force at the time of effective termination of PPAs. In addition, BE ZRt will benefit from the support of cogeneration under the Governmental Decree of November 28, 2008 concerning the obligations to purchase electricity produced from waste, renewable sources and cogeneration. However, BE ZRt has, to date, received no guarantee as to the maintenance of these conditions over time, which puts it on a risk of non-recovery of costs (the risk was covered by PPAs). In this context, and to protect its investor interests, BE ZRt reserves the right to initiate appropriate actions;
- DEMASZ ZRt was fully-owned by EDF as of December 31, 2008. Demasz distributes electricity in southeast Hungary (19.6% of the country) and markets electricity across the entire country. In 2008, DEMASZ ZRt and its sales subsidiary supplied 5.77 TWh of electricity to 772,920 customers. DEMASZ ZRt has several subsidiaries of which two are wholly owned;
  - Demasz Hàlozati Eloszto Kft was created on January 1, 2007, to comply with the legal requirement that regulated and non-regulated businesses be separated. It owns the electricity grid assets (31,636 km of high-, medium-, and low-voltage lines) and operates the regulated distribution business, supplying power to 771,797 delivery points;
  - EDF ENERGIA HUNGARIA Kft (formerly D-Energia Kft) was created in 2003 to supply electricity in Hungary to customers who opted for the

EnBW also holds the following minority holdings in the country:

- 21.7% of the producer Matrai (held by RWE at 51%), which had an installed capacity of 836 MW in 2008 (Source: EnBW and RWE 2008 annual
- 27.25% of the distributor ELMÜ, held at 55% by RWE (ELMU serves an area of more than two million inhabitants);
- 26.83% of the distributor EMASZ held at 54% by RWE (Source: EnBW and RWE 2008 annual reports).

#### 6.3.1.4.5.3 SLOVAKIA

#### The EDF group's activities in Slovakia

The Group operates in Slovakia through a 49% holding in the distribution and supply company, Stredoslovenská Energetika, a.s. (SSE), based in the center of Slovakia (province of Zilina), which covers approximately onethird of the country's territory. SSE has 32,340 km of high, medium-voltage and low power lines. As of December 31, 2008, SSE had 704,755 customers representing 5,122 GWh.

In order to be in compliance with regulatory requirement of regulated and non regulated activities separation, SSE's regulated activities have been transferred from July 1, 2007, to its wholly owned subsidiary Stredoslovenskà energetika – Distribucia a.s., which distributes 6,005 GWh.

In accordance with the shareholders' agreement entered into on June 25, 2002 with the Slovak National Property Fund, the EDF group names three of the five members of the SSE Executive Board, including the Chairman and has one representative among the nine members of the supervisory board. At the Shareholders' Meeting, decisions are made unanimously by the two shareholders.

Within the context of the continuing privatization process, the aforementioned shareholders' agreement gives the Group a preemption right over 2% of SSE's shares.

The Group intends to grow its share of this market and is looking into various capacity expansion projects.

#### 6.3.1.4.5.4 CZECH REPUBLIC

#### The EDF group's activities in the Czech Republic

The Group operates in electricity generation and distribution in the Czech Republic through EnBW minority holdings in PRE-Holding and PT Holding, respectively, the electricity distribution, and the heat distribution companies of the city of Prague.

#### 6.3.1.4.5.5 Russia

Russia reorganized its electricity sector under a market model and several major European energy companies (E. ON, Enel, Fortum, RWE) are significantly present. EDF has not positioned itself on privatizations initiated by the Russian government, but looked at development opportunities in Russia in an industrial synergies and long term cooperation view.

Since 2007, EDF has developed its relations with Inter RAO EES (listed company and majority owned by State funds). This company, with generation assets in Russia and in third countries, is at present, in fact, the only able to carry out import/export of electricity. A cooperation agreement was signed with this company on September 20, 2008 to consider joint projects of development in Russia and other countries.

#### 6.3.2 Latin America and the United States

#### 6.3.2.1 LATIN AMERICA

In 2008 the EDF group terminated its strategy to withdraw from the companies located in Argentina and Mexico in which it had shareholdings.

#### **6.3.2.1.1** ARGENTINA

#### Sale of Distrocuyo

On September 2008, EDF sold to Nucleamiento Inversor Sociedad Anonima (NISA) its stake in Distrocuyo, a power transmission company and EDF's last asset in Argentina.

#### 6.3.2.1.2 BRAZIL

#### 6.3.2.1.2.1 LIGHT

Light carries out an electricity generation, distribution, and supply business. It is located in the State of Rio de Janeiro covering a concession area of 10,970 km² and serves 31 towns (including Rio de Janeiro). Light also owns generation assets (mostly hydropower) with an installed capacity of 852 MW (i.e., 1% of the power available in Brazil).

On March 28, 2006, EDF signed an agreement with Rio Minas Energia Participaóes SA (RME), a consortium of Brazilian companies, to sell a 79.4% stake in Light for US \$320 million. The sale was approved by French and Brazilian regulators and was completed on August 10, 2006. This left EDF with a 10% stake in Light, which was diluted to 6% after Banco Nacional de Desenvolvimento Economico e Social (BNES) exchanged its convertible bonds into shares. Light's remaining share capital is traded on the Brazilian stock exchange.

#### 6.3.2.1.2.2 Norte-Fluminense

The EDF group owns 90% of Norte-Fluminense, the company which built and now operates the combined-cycle gas turbine at Norte-Fluminense in the State of Rio de Janeiro. This power plant has a capacity of 869 MW. Norte-Fluminense sells all of its generation to Light under a power purchase agreement (PPA).

#### 6.3.2.2 UNITED STATES OF AMERICA

The United States is the largest energy market in the world, with total sales of 3,773 TWh and a forecasted average annual growth rate of 1.1% between 2008 and 2030 (source: Energy Information Administration, June 2008). The 2005 Energy Policy Act ("EPACT") introduced incentives to encourage investments in nuclear power plants. These include a federal loan guarantee to reduce the borrowing costs of some types of construction loans, production tax credits for electricity companies under certain conditions, and standby support for regulatory risks. The amount of the federal guarantee of financing that potentially will be paid by the end of 2009 has been set so far to 18.5 billion dollars. In this new context, nuclear plants projects are under development by many of the major US energy companies. 17 requests for files relating to construction and operation licenses (for 26 reactors) have been filed in early November 2008 with the American Nuclear Regulatory Commission (NRC) and 12 power companies (for 21 reactors) have applied for a financing guarantee from the Department of Energy for an aggregate amount of approximately \$120 billion.

On July 20, 2007, EDF and US-based Constellation Energy Group (CEG) signed an agreement to create a 50/50 joint venture named "UniStar Nuclear Energy LLC". UniStar will build, own, and operate European pressurized water reactor (EPR) nuclear plants in the US.

Under the terms of the joint venture agreement signed on July 20, 2007, EDF has paid in an initial \$350 million of capital to the joint-venture, and will contribute up to \$275 million of additional funding as approvals are granted to build EPRs in United States.

In 2008 were made additional contributions of 100 and 75 million dollars respectively to the first license application registration for construction and operation to the American Nuclear Regulatory Commission for the Calvert Cliffs 3 project (March 2008) and the second license application for the Nine Mile Point 3 project (end September 2008). The license file for Calvert Cliffs 3 project has been formerly accepted for review beginning June 2008 and the proposed Nine Mile Point 3 on December 15, 2008. First EPR's

commissioning should commence, according to the current timetable, at the end of 2015. In return for EDF's cash contributions, Constellation Energy provided UniStar Nuclear Energy with its participation in the joint venture with Areva, named UniStar Nuclear, (which holds the exclusive development of the EPR in the USA) and the rights to use its Calvert Cliffs, Nine Mile Point, and R.E. Ginna nuclear plants in order to build up to four standard EPRs in sites owned. UniStar will be governed by a ten-member Board of Directors, comprising a Chairman and four other members, all appointed by CEG, and five other members appointed by EDF.

Since its creation, UniStar Nuclear Energy is devoted to the launching of EPR projects in the United States including the first project on the Calvert Cliffs site, with in particular:

- setting up and monitoring of files of authorization and license (including the license for the construction and operation);
- the implementation of a plan of technical actions with industrial partners Areva and Bechtel, limited, pending the obtaining of permits and licenses, to the actions necessary to meet the objectives of planning of commissionning of units. These actions have brought on the reservation and supply of critical components from Areva where bottlenecks have been identified, the signing of contracts with Alstom to booking a set of four turbines and studies of associated engineering, signing contracts for detailed engineering studies with the consortium Areva/Bechtel and the launch of negotiations on the contract of EPC (Engineering, Procurement, Construction);
- the start of negotiations for a financing guarantee from the U.S. Federal government (Federal Loan Guarantee Department of Energy) supplemented by a guarantee from Coface.

EDF and Constellation Energy Group have also signed on July 20, 2007 a cooperation agreement in order to explore potential joint developments of both companies in the United States. In this context, EDF and Constellation Energy have signed on July 25, 2008 an operating agreement to establish a joint venture owned 50/50 named CeTerre LLC to explore and select potential sites for building nuclear plants on behalf of UniStar Nuclear Energy. To date, EDF has brought \$300 000 to the company CeTerre.

Also on July 20, 2007, EDF secured the right to purchase up to 5% of CEG's shares on the open market in the immediately following 12 months of the agreement and up to 9.9% between the first anniversary of the agreement and the fifth.

On September 9, 2008, EDF owns 9.51% in Constellation Energy by several purchases of shares on the market.

On September 19, 2008, MidAmerican Energy Holdings Company ("MidAmerican") and Constellation Energy announced that they had reached a definitive merger agreement in which MidAmerican would purchase all of the outstanding shares of Constellation Energy for cash consideration of approximately \$4.7 billion, or \$26.50 per share and that Constellation Energy would issue to MidAmerican \$1 billion of preferred equity upon signing the definitive agreement.

On December 3, 2008, EDF announced that it had proposed to Constellation Energy (i) to acquire a 50% ownership interest in Constellation's nuclear generation and operation business for \$4.5 billion, (ii) to make an initial \$1 billion cash investment in Constellation to be credited against the purchase price for EDF's interest in the nuclear generation business, and (iii) to grant Constellation Energy a put option pursuant to which Constellation Energy could sell non-nuclear generation assets to EDF having an aggregate value of up to \$2 billion.

On December 8, 2008, Constellation Energy announced that its Board of Directors authorized the company to begin immediate discussions and exchange of information with EDF related to EDF's proposal.

On December 17, 2008, Constellation Energy and MidAmerican announced that they had jointly reached an agreement to terminate their merger agreement.

According to the terms of the termination agreement, MidAmerican received a termination indemnity of \$175 million. Furthermore, the preference shares issued to MidAmercian were converted and MidAmerican received a bond with an interest rate of 14%, payable on December 31, 2009, approximately 20 million ordinary shares of Constellation Energy, representing 9.99% of the existing shares, and approximately \$418 million in cash.

The same day, EDF and Constellation Energy announced a definitive agreement under which EDF would acquire a 49.99% interest in Constellation Energy Group for \$4.5 billion. This transaction remains subject to condition precedents, including applicable regulatory approvals.

Constellation Energy Group owns 3,869 megawatts of nuclear generating capacity, which consists of the Calvert Cliffs Nuclear Power Plant in Maryland, and Nine Mile Point Nuclear Station and R.E. Ginna Nuclear Power Plant in New York.

EDF's interest in Constellation Energy Group will be structured as a new joint venture between the companies, separate from the existing UniStar joint venture.

Pursuant to the agreement, in December 2008, EDF has made several key investments to strengthen Constellation Energy's liquidity position:

- EDF made a \$1 billion cash investment in Constellation Energy through the purchase of newly issued Constellation Energy non-convertible cumulative preferred stock, which will be surrendered to Constellation Energy upon closing of the transaction and credited against the \$4.5 billion purchase price for EDF's interest in Constellation Energy Group (see note 4.2 to the 2008 Consolidated Financial Satements);
- EDF and Constellation Energy entered into a two-year asset put option that allows Constellation Energy to sell to EDF up to \$2 billion of non-nuclear generation assets (see note 4.2 to the 2008 Consolidated Financial Statements):
- EDF provided Constellation Energy with a \$600 million interim backstop liquidity facility, which will remain available until receipt of all regulatory approvals relating to the transfer of the non-nuclear generation assets that could be sold under the asset put option or the date that is six months after the date of the investment agreement, whichever is earlier (see note 4.2 to the 2008 Consolidated Financial Satements).

At December 31, 2008, EDF group held 8.52% of CEG share capital (taking into account shares transferred by CEG to MidAmerican following the termination of the merger agreement (see hereinabove)).

During 2008 fiscal year, CEG's sales amounted to \$19.8 billion, a decrease of 6.5% compared to 2007. 2008 fiscal year resulted into a net loss of \$1.31 billion for CEG.

The US energy market incorporates a great deal of innovation, with substantial R&D activity for both upstream and downstream operations. Numerous companies and international organizations, including EDF competitors, are based in the US; in this context, EDF monitors this market on an industrial and strategic basis.

EDF participated in the formation of the NuStart Energy Development LLC consortium, set up in March 2004, which includes the major nuclear energy companies (Constellation Energy, Duke Power, Entergy, Exelon Generation, Florida Power & Light, Progress Energy and Southern Company) and constructors (General Electric, Westinghouse). The aim of the project is to launch and develop nuclear energy in the United States by 2014, by working on two "passive" reactor projects, Westinghouse's AP 1000

(Advanced Passive 1000 MW Reactor) and General Electric's ESBWR (Economic Simplified Boiling Water Reactor). Through its shareholding, EDF will have access to additional information, technical and economical, on these new generation reactors, which may be available on the market during the renewal program of the French nuclear power plants.

EDF and Exelon, the first U.S. nuclear operator, has signed on April 21, 2008, a memorandum of understanding relating to a cooperation for a period of five years. Under this memorandum of agreement, EDF and Exelon will exchange and share their experiences of nuclear operator.

The Group is also present in the United States through EDF Energies Nouvelles in the wind farm operating and maintenance sector on behalf of third parties (see section 6.4.1.1 ("New energies")).

The acquisition of the trading company Eagle Energy Partners by EDF Trading is developed section 6.2.1.3.3.7 ("Development of EDF Trading activities overseas").

### 6.3.3 Asia/Pacific

The EDF group's activities managed by the Asia-Pacific Division mainly focus on China and the Mekong Delta, both significant growth areas.

Investments in the power production field in Asia and in particular in China are one of the EDF group's major industrial stakes. The Group is investing in EPRs and other projects in the region that will give it access to state-of-theart technology, as well as promote its industrial expertise, particularly in the nuclear area. This will give EDF competitive and technological advantages in the global arena, as it works to launch a new global nuclear program, penetrate the booming emerging markets for equipment, and shore-up its power generation fleet in France.

#### 6.3.3.1 THE EDF GROUP'S ACTIVITIES IN CHINA

The EDF group has been operating in China for the past 20 years, advising companies on nuclear and hydropower technologies. Today it is one of the country's largest foreign investors in terms of power generation, with its investments in coal-fired plants that have a total installed capacity of 3,716 MW. EDF has also formed partnerships offering new investment opportunities for nuclear and the more advanced coal-fired facilities, as well as wind energy and hydropower systems.

#### **NUCLEAR POWER GENERATION**

• Daya Bay and Ling Ao

EDF directed the design, construction and commissioning of two 1,000 MW nuclear reactors in 2004, then helped the owner, China Guangdong National Power Co. (CGNPC), build a similar Phase I plant at Ling Ao, which was started in 2002. EDF now assists CGNPC with the operation of these facilities. The high level of performance achieved by these nuclear plants illustrates the company's solid know-how in China.

EDF is currently helping one of GCNPC's subsidiaries, China Nuclear Power Energy Corporation (CNPEC), with Phase II of the Ling Ao project, which consists of building two additional 1,000 MW units on the site for commissioning in 2010.

• First agreement signed for a foreign investor in China in nuclear power generation

Following the industrial partnership announced in October 2006, EDF and the Chinese electricity producer China Guangdong Nuclear Power Holding Company (CGNPC) signed on August 10, 2008, in Beijing, the final agreements for the creation of a joint venture company to be called Guangdong Taishan Nuclear Power Joint Venture Company Limited (TNPC). The aim of the joint venture is to construct and operate two nuclear EPR power stations at Taishan in the province of Guangdong, modelled on the existing EPR reactor built by EDF at Flamanville in Normandy.

EDF will hold 30% of TNPC for a period of 50 years, which is the maximum permitted for a joint venture in China. The Group becomes for the first time an investor of nuclear reactors in this country.

Preliminary work at the Taishan 1 site started in late 2007 and the first concrete pouring is scheduled for autumn 2009, less than two years after the one at Flamanville 3. Some contracts have already been signed with Areva and Alstom for the supply of respectively the nuclear and the turbine equipments. The first unit should be commissioned at the end of 2013 and the second in 2014. At the height of construction work, over sixty EDF experts will be on-site at Taishan.

The success of the project will hinge on the complementarity between EDF's and CGNPC's skills. At the same time as creating the joint venture, the two groups also concluded a technical assistance contract under which EDF will share its knowhow by seconding skilled personnel and providing technical documentation. CGNPC is China's leading nuclear operator and will, for its part, bring its experience as an owner and an operator at Daya Bay and Ling Ao. It will also bring its knowledge of the nuclear electricity sector and of the industrial network of China to the partnership.

The creation of this joint venture company is still submitted to the approval of the Chinese authorities, as any foreign investment. It reinforces the productive cooperation that EDF has enjoyed with China and CGNPC for over 20 years. As part of a global cooperation agreement signed in 2007, EDF and CGNPC will also examine the opportunities for joint development projects in China and at an international level.

#### **COAL-FIRED POWER GENERATION**

#### • Figlec and Synergie

As of December 31, 2008, EDF wholly owned French Investment Guangxi Laibin Electric Power Company, Ltd (Figlec), the company which owns the 720 MW Laibin B power plant and 85% of Synergie, the company responsible for operating and maintaining Laibin B. The remaining 15% of Synergie is owned by Chinese partners. Laibin B was commissioned in November 2000 as part of a build, operate, and transfer (BOT) project, and will be transferred to the Guangxi government in 2015.

• Shandong Zhonghua Power Company (SZPC)

As of December 31, 2008, EDF held a 19.6% stake in Shandong Zhonghua Power Company (SZPC), which owns three coal-fired power plants with a total capacity of 3,060 MW. SZPC's other owners are two Chinese companies and CLP of Hong Kong. SZPC's plants were commissioned between 1987 and 2004, and will be gradually transferred to the Chinese government between 2020 and 2028.

#### New projects

The Group has initiated discussions with Chinese operators of power generation (Genco or Generation Company) for possible investments in new coal technology, "supercritical" or "ultra supercritical".

Early April 2009, the Chinese Ministry of Trade (MOFCOM) approved the transaction which allows EDF to hold a 35% interest, along with Datang, in the company that owns the Sanmexia plant in the Province of Henan, which was put into service in 2007 and has an installed capacity of 2 x 600 MW ("supercritical coal technology").

#### NATURAL GAS OPERATIONS

#### Buget

As of December 31, 2008, EDF held a 20% stake in Buget, a design, construction, and consulting firm specialized in natural gas distribution. Buget's other owners are GDF Suez, with a 20% stake, and Chinese partners.

#### HYDROPOWER GENERATION

EDF has been involved in hydropower technology since 1985, and its engineering skills and consulting services are recognized in the industry. In fact, EDF has helped develop over half of the hydropower facilities in China.

#### OTHER BUSINESSES AND PROSPECTS

EDF and its Chinese partners are looking into possible investments in the wind energy sector, following the new law on renewable energies passed in China in early 2006.

In the area of power transmission and distribution, EDF has won several consulting contracts.

#### 6.3.3.2 THE EDF GROUP'S ACTIVITIES IN SOUTHEAST ASIA

The EDF group's businesses in southeast Asia are focused on developing its electricity business in the Mekong Delta region, where Thailand and Vietnam are the primary growth drivers. This region offers opportunities for independent power plant (IPP) projects, such as Phu My 2.2 in Vietnam and Nam Theun 2 in Laos. Thus, EDF is studying possible partnerships for designing, building, and operating new fossil fuel, hydropower, and, for the long-term, nuclear power plants.

#### **6.3.3.2.1** VIETNAM

As of December 31, 2008, EDF held a 56.25% stake in Mekong Energy Company Ltd. (MECO), the owner of the Phu My 2.2 combined-cycle gas turbine plant. Phu My 2.2 has a generation capacity of 715 MW and was commissioned in 2005. It is the first independent power plant (IPP) project financed exclusively by foreign investors in Vietnam. MECO's other owners are international subsidiaries of Sumitomo Corporation (28.11%) and Tokyo Electric Power Corporation, Inc (Tepco) (15.6%), both Japanese companies. Phu My 2.2 was developed under a 20-year build, operate, and transfer (BOT) contract; EDF built the turnkey plant and operates it under a consulting agreement.

In order to meet the need for new-generation plants in southern Vietnam, EDF has contacted the Vietnamese government about potentially building advanced technology coal-fired and natural gas facilities.

#### 6.3.3.2.2 LAOS

As of December 31, 2008, EDF holds 35% of Nam Theun 2 Power Company (NTPC). NTPC owns the 1,070 MW Nam Theun 2 hydropower plant that is scheduled to go into service in late 2009. NTPC's other owners are two companies from Thailand (EGCO (Energy Generating Company) 25%, ITD (Italian-Thai Development Company) 15%) and one from Laos (LHSE (Lao Holding State Enterprise) 25%). EDF also heads the consortium of NTPC owners and is overseeing the construction of Nam Theun 2. EDF will operate the plant for 25 years through its stake in NTPC and under a concession contract concluded with the Government of Laos; Thailand will purchase most of the electricity generated (around 95%), the balance for the Laos (5%).

To date, the civil works are almost completed, the reservoir was filled during the rainy season in mid-2008, the tunnel was filled with water and the

assembly of machines is nearing completion. The gradual implementation is scheduled for end of 2009.

Similarly, social and environmental measures are largely already in place. Beginning in 2008, several months before flooding of the reservoir, all the affected villagers had joined their new homes in new villages along the reservoir. The first rice crop, in fields recently cleared, took place in October 2008.

Particular attention is paid to monitoring water quality in the reservoir and downstream. The existence of a threshold of re-oxygenation and social measures implemented along the Xe Bang Fai River should minimize the potential impacts of releases of water downstream.

#### **6.3.3.2.3** THAILAND

EDF has concluded an advisory agreement in the area of transmission and distribution with the Thai company MEA.

#### 6.3.4 Middle East and Africa

The Group currently operates only in the Ivory Coast power market and through decentralized services companies of the Mission Access to Energy in Mali and South Africa.

#### **6.3.4.1 IVORY COAST**

As of December 31, 2008, EDF indirectly holds 32.85% of the owner company (Azito Energie) and directly holds 50% of the operating company for the Azito power plant (Azito O&M). Located near Abidjan, the power plant, with a capacity of 300 MW, is comprised of two gas turbines, fueled by natural gas from the Ivory Coast itself. It supplied 2,208 GWh of electricity in 2008. All generation is sold back to the national Ivory Coast operator, which has satisfied its contractual obligations since the start of commercial operations of the power plant in 1999.

#### 6.3.4.2 SOUTH AFRICA

Due to the robust growth outlook for the South African economy, the South African government plans to double the country's installed power generation capacity (from 42 GW to 80 GW) by 2030, with a significant portion of the increase coming from nuclear power. Following a consultation on the supply of 3,500 MW nuclear, the national electricity company Eskom said the tender was unsuccessful and abandoned this operation for the time being due to the amount of necessary investment and the current economic situation.

#### 6.3.4.3 ACCESS TO ENERGY MISSION

For the past 12 years, EDF has been working to give more people in developing countries access to electricity. Most of these efforts are currently focused in Africa.

EDF achieves this goal through partnerships with other companies in the industry, such as Total and Nuon, and will henceforth systematically seek to work with local companies on each project, so that they can take over once the operations become profitable and sustainable.

As of December 31, 2008, EDF owned 70% of Koraye Kurumba, the electricity utility serving the Kayes area in northeast Mali. The stake of 50% of Yéelen Kura, the electricity utility serving southern Mali, was sold on November 25, 2008 to FRES (Foundation Rural Energy Services). As of December 31, 2008, EDF also owned a stake of 65% of KES, a company that generates and distributes electricity and markets bottled gas in the Kwazulu Natal and Eastern Cape provinces. Negotiations were underway for the entry of a local operator in that company's capital up to 15%.

# 6.4

## Other activities and transverse functions

#### 6.4.1 Other activities

#### **6.4.1.1 NEW ENERGIES**

The development of renewable energy sources has become a reality in Europe and in the United States. In 2008, 8,484 MW of wind power were installed in the European Union, of which 1,609 MW in Spain (source: Ewea) and 1,665 MW in Germany and 8,358 MW in the United States (source: Awea and Ewea). The combined installed of wind power in these two areas now amounts to more than 90,000 MW wind power and more than 120,000 MW worldwide. This development concerns wind power to a considerable extent, with biomass in second place and solar power being seen as a future growth area which is already gaining importance. Hydropower has reached saturation in these countries. The EDF group is the European leader in renewable energies, as a result of its hydropower. The EDF group's ambition is to develop all forms of renewable energy and, in particular, wind power generation. EDF also intends to favor the emergence of new technologies in conjunction with R&D and to develop generation capacities in wind power, hydropower, solar energy, biomass, biofuels, and geothermal technology. This process is in line with the Group's sustainable development policy (see section 6.4.3.2 ("Environmental policy")). Finally, EDF promotes development of generation of the energy in the consumption place as heat pumps and wood.

#### **6.4.1.1.1** DESCRIPTION OF NEW ENERGIES

#### WIND POWER

The wind turbine or aero-generator is a wind sensor, where the force of the wind drives rotor blades attached to an electrical generator. For one MW of installed capacity, the average annual electricity generation can vary from 2 to 4 GWh, depending on the quality of the site and the type of machines used. The investment amount is of approximately €1.3-1.5 million per MW.

The progress of the wind power has been particularly strong in Europe since 1997, with the adoption of the Kyoto protocol and the reinforcement, in some countries, of the support of electric generation through wind power.

In addition to strengths in the wind power sector, through EDF Energies Nouvelles, the EDF group has skills which are spread over different entities, such as the Research and Development Division for technical monitoring and expertise and the Generation and Engineering Division for project management, engineering and contracting.

Finally, the subsidiaries of EDF Energy and mainly Edison also have wind farms in operation and projects in development.

The industrial base in operation as of December 31, 2008, including all subsidiaries amounted to more than 1,600 MW of assets owned by project companies, in which the Group has an interest, whether controlling or not (1,400 MW held by EDF Energies Nouvelles).

The key geographical areas for future developments are the United Kingdom and Italy, where there is a guota system, France, and the rest of Europe and the United States. The objective is to build critical masses in countries where the profitability figures are the most attractive.

#### **S**OLAR POWER

Photovoltaic solar power (electricity generation) is not the same as thermal solar power (heat production).

Photovoltaic panels were originally developed for independent applications which were not connected to electricity networks. In the last years, under the impetus of the renewable energy policies, the photovoltaic market, which is growing at the rate of 30 to 40% a year, has been developing mainly in the network-connected applications.

EDF Energies Nouvelles focuses the development strategy of the EDF group in the new energies, directly to the centralized generation and via its subsidiary EDF Energies Nouvelles Réparties (50% EDF Energies Nouvelles, EDF 50%) for all products included in the building (roof photovoltaic, solar thermal, heat pumps and energy wood). EDF Energies Nouvelles Réparties is also in charge of the upstream policy (security of supply of silicon and production of innovative technologies) of EDF Energies Nouvelles in photovoltaics.

EDF offers solutions using renewable energy sources to private, industrial and local authority customers. The objective is to position itself for future growth, through integrated residential, service sector and local authority packages based on photovoltaic cells, thermal solar power, heat pumps and wood energy.

Confronted to the two major challenges of the photovoltaic, which are the supply of silicon of photovoltaic quality and the reduction of its cost, EDF is investing in research on future technologies: new processes of silicon purification and the clarification of the corresponding photovoltaic cells, new processes of manufacturing photovoltaic modules and an ambitious R&D project for the development of thin-film photovoltaic technologies (the CISEL project) (see Chapter 11 ("Research and development policy, patents and licenses")).

#### **G**EOTHERMAL ENERGY

The temperature of the rocks in the earth's crust increases with depth: on average, 3 degrees Celsius every 100 meters. In some regions of the globe, the earth's heat reaches the surface as heat sources, water or steam. Hot water is exploited directly as heat: central heating in dwellings or greenhouse heating. Steam extracted from beneath the ground is used in the generation of electricity: it drives a turbine as it does in an oil-fired and coal-fired power plant. It is also possible to use hot and dry rocks as a source of energy. Water is circulated between two wells bored into the ground: water poured into one of the wells is heated as it passes into the dry rocks and emerges as steam (enthalpy).

There are high temperature resources in France's overseas departments. The EDF group is present in this activity notably through its shareholding in the company Géothermie Bouillante (30%-owned) in Guadeloupe.

#### **BIOMASS**

Technologies based on biomass mainly consist of burning certain waste, in particular from the timber and farming industries, to produce heat or electricity.

Thus, in addition to hydropower, wind power and geothermal, biomass can also, to a lesser degree, contribute to the objective of developing renewable energy sources.

Through its holdings, notably in Dalkia, the EDF group owns shares in France and abroad in several dozen heating systems and small size generating facilities which are mainly fueled with wood.

EDF Energies Nouvelles owns a plant in Spain (Lucena) of a capacity of 26 MW, of which 13 MW come from biomass and 13 MW come from co-generation, and develops other projects in France and Italy.

#### OTHER TECHNOLOGIES

In anticipation of, and positioning itself for, new technological solutions, the EDF group devotes significant resources to Research & Development areas which may prove to be vehicles for growth in the medium term: tidal energy (submarine turbines using the energy in marine currents, in the same way that wind generators use the energy from air currents) and biomass gasification, as well as areas that have already been discussed (thin film photovoltaic cells, deep geothermal).

In October 2008, EDF group has appointed Irish company OpenHydro Group Ltd to build the first underwater tidal turbines at Paimpol-Bréhat (Côtes d'Armor) as part of its pilot project to build a tidal turbine farm to generate electricity from tidal energy.

The OpenHydro partnership concerns the installation of 4 to 10 tidal turbines with a total capacity of between 2 MW and 4 MW. These will be connected to the electricity grid from 2011 onwards. The technology used for the tidal turbines does not require any underwater work: fully submerged and easy to move, the turbines can be raised for maintenance operations.

The test unit at Paimpol-Bréhat will enable the technology to be tested in real-life conditions and allow its impact on the marine environment to be assessed in detail during various studies. The Paimpol-Bréhat region, which has some of the most powerful tidal currents in France, could in future accommodate other test technologies piloted by EDF. This project illustrates EDF group's commitment to developing marine energy, as well as its ambition to acquire expertise and develop this industry by 2020, notably alongside IFREMER, the French research institute for the exploitation of the sea.

#### **6.4.1.1.2** EDF ENERGIES NOUVELLES

EDF's commitment of renewable energy sources is undertaken mainly by EDF Energies Nouvelles (formerly SIIF-Energies).

#### (A) HISTORY OF EDF GROUP'S SHAREHOLDING IN EDF ENERGIES NOUVELLES

In October 2000, EDF acquired a 35% stake in the share capital of SIIF-Energies, a company incorporated in 1990 in order to operate thermal and hydroelectric power plants. In December 2002, EDF raised its holding to 50%.

EDF Energies Nouvelles initial public offering took place in November 2006. Its shares were listed on Euronext Paris S.A.'s Eurolist on November 28, 2006. Following the initial public offering, the share capital of EDF Energies Nouvelles breaks down as follows: 50.00% is held by EDF, 25.09% by the Mouroutoglou Group and 24.91% by the public (including employees).

In order to organize their relationship following the initial public offering of EDF Energies Nouvelles, the EDF group and Pâris Mouratoglou entered into a shareholders' agreement that defines the EDF Energies Nouvelles company project, determines the allocation of the company's Board of Directors seats, and sets corporate governance rules and liabilities related to the transfer by Pâris Mouratoglou and SIIF Luxembourg (the "Mouratoglou Group") of all or part of their shares of EDF Energies Nouvelles. The provisions of the shareholders' agreement came into force the same day as the EDF Energies Nouvelles shares became listed on the Euronext Paris' Eurolist.

Under the terms and conditions of the shareholders' agreement and of the agreement entered into on July 2006, the EDF group has a preemptive right

if the Mouratoglou Group transfers part or all of its ownership to an identified third party. Moreover, if the Mouratoglou Group holds less then 10% of the share capital of EDF Energies Nouvelles (following the initial public offering), the shareholders' agreement provides that the Mouratoglou Group can require the EDF group to purchase the remaining shares through a put option. Similarly, if the Mouratoglou Group does not exercise the put option, the EDF group may require the Mouratoglou Group to sell its remaining shareholding in EDF Energies Nouvelles to the EDF group through a call option. Finally, Pâris Mouratoglou committed himself, under the shareholders' agreement, not to carry out any business, directly or indirectly through a subsidiary, that could be in competition with the business of EDF Energies Nouvelles and its subsidiaries, in French territories or in any country where the company conducts or will conduct business.

Due to the existence of this shareholders' agreement, the EDF and Mouratoglou Groups have filed a declaration with the AMF on November 13, 2006, stating that they were acting in concert with respect to EDF Energies Nouvelles.

On September 3, 2008, EDF Energies Nouvelles launched a capital increase with preferential subscription rights to existing shareholders for an amount of €500 million to finance its expansion in the solar photovoltaic segment. The Company's main shareholders, the EDF group and Mouratoglou group, have committed to subscribe to the capital increase prorata their shareholding, which represents a total of 75.1% of the share capital. Thus at the end of the transaction, the shareholding structure of EDF Energies Nouvelles remains unchanged: 50% owned by EDF, 25.10% owned by the

Mouratoglou group and 24.90% in the public (including employees). The transaction resulted in the issuance of 15,513,683 new shares.

In this context, and given its intention to accelerate its development in solar photovoltaics, EDF Energies Nouvelles has decided to revise upwards its target of net installed capacity presented on the occasion of the IPO, 3,000 MW of net installed capacity at the end of 2011, and to bring it to 4,000 MW at the end of 2012, including 500 MWc of solar energy.

#### (B) EDF ENERGIES NOUVELLES ACTIVITIES

EDF Energies Nouvelles carries out several activities:

- development, construction and operation of electricity generation assets, from renewable energy sources;
- sales to third parties of electricity generation assets based on renewable energy sources which it has developed and built; and
- operation and maintenance of wind farms on behalf of third parties and on its own behalf, mainly in the United States.

EDF Energies Nouvelles is present in European countries that have a strong development potential for renewable sources of energy, especially wind power (France, Portugal, Greece, the United Kingdom, Italy and Turkey), as well as in the United States, Mexico and Canada. EDF Energies Nouvelles also carries out activities in Belgium, Spain, Germany and Bulgaria.

The following table sets forth the breakdown of the installed capacity of EDF Energies Nouvelles, by subsidiary and by country, as of December 31, 2008.

(Installed capacity at December 31, 2008)	Total <sup>(1)</sup>	Net <sup>(2)</sup>
WIND POWER		
France	263.4	223.7
Portugal	475.8	283.0
Greece	149.4	145.1
Italy	234.1	111.2
UK	143.2	123.2
Turkey	49.0	12.2
Germany	3.0	3.0
US	712.7	486.7
Total Wind Power	2,030.6	1,388.1
SOLAR	20.8	12.9
Hydropower	128.4	101.4
Other operations	95.5	62.0
TOTAL	2,275.3	1,564.4

- (1) Gross capacity: Total capacity of the facilities in which EDF Energies Nouvelles has a stake.
- (2) Net capacity: Capacity corresponding to EDF Energies Nouvelles' stake.

Besides wind power, EDF Energies Nouvelles has made of the photovoltaic solar its second axis of growth (with 20.8 MW total installed as of December 31, 2008). The company also operates in small scale hydropower (with 128.4 MW total installed as of December 31, 2008) and biomass with 26 MW total installed as of December 31, 2008. As part of its traditional business, EDF Energies Nouvelles also exploits fossil fuel and cogeneration power plants (69.5 MW total installed as of December 31, 2008).

During 2008, EDF Energies Nouvelles continued to pursue its development in wind power, the primary focus of its growth, and accelerated its development in the solar sector.

In Portugal, EDF Energies Nouvelles implemented wind farms at Ventominho, the most important wind farm in Europe, with a capacity of 240 MW and the first two tranches of the wind farm of Arada (92 MW out of a capacity totalling 112 MW). In France, very large wind farms have also been implemented: Salles-Curan (87 MW), Chemin d'Ablis (52 MW)

and Villesèque (51 MW). In Italy, the Company established the wind farm of Campidano (70 MW). In Greece, Imerovigli wind farm (30 MW) and the extension of Profitis Ilias (8 MW) were put into operation. Finally in the UK, the Group has put into service Walkway parks (14 MW) and Bicker (26 MW). In the United States, the Group established the park Waps North (100.5 MW gross in Minnesota) for their own account during the year 2008. In addition, three parks were built for third parties and delivered in 2008: Goodnoe (94 MW), Walnut (153 MW) and Grand Meadows (100.5 MW).

In total, in 2008, EDF Energies Nouvelles has put into service 813 MW of wind power capacity (517 MW net) and owns as of December 31, 2008, 888 MW under construction (560 MW nets), and wind projects underway covering an additional 14,494 MW. In addition, more than 500 MW of contracts of Development-Sale of Structured Assets were signed in 2008 with U.S. power companies for deliveries of planned parks between 2009

and 2011. EDF Energies Nouvelles also found with several U.S. companies for new contracts-maintenance operation on 2,139 MW.

In Canada, the Saint Laurent Energies consortium owned by EDF Energies Nouvelles at 60%, was selected by Hydro-Quebec for the construction of five wind farms with a total capacity of 954 MW.

As part of its international development, EDF Energies Nouvelles took a 50% stake, in December 2008, in Polat Enerji's capital, a leading wind developers in Turkey.

The company stepped up its investments in photovoltaic technology, now the second priority axis of development of EDF Energies Nouvelles, in 2008. The solar energy market is being driven by government incentives, and has expanded rapidly with significant technological advancements. EDF Energies Nouvelles has procurement agreements in place to cover its short- and medium-term needs for the photovoltaic modules used in its solar power stations. The biggest contract is with First Solar, amounting to 352 MWc the total volume of panels ordered from First Solar for 2009-2012. EDF Energies Nouvelles has signed a contract in 2008 with the U.S. company Nanosolar giving access to part of its production of solar panels from 2009 and took a stake in the company through its subsidiary EDF Energies Nouvelles Réparties.

EDF Energies Nouvelles has solar energy projects underway, at ground and roof, primarily in France, Italy, Greece, Spain, Unites States and in Canda, to build stations for its own use and for third parties.

In 2008, EDF Energies Nouvelles has built and put into service 20 MWc of solar projects whose the plant of Narbonne in southern France with a capacity of 7 MWc. At December 31, 2008, EDF Energies Nouvelles had 21 MWc of installed solar capacity and 29 MWc under construction.

EDF Energies Nouvelles had 1,723 employees (including EDF Energies Nouvelles Réparties) as of December 31, 2008.

## 6.4.1.1.3 OTHER HOLDINGS IN THE RENEWABLE ENERGY SECTOR

## EDF ENERGIES NOUVELLES RÉPARTIES (EDF ENR)

EDF ENR jointly-owned by EDF and EDF Energies Nouvelles. This company applies EDF's developments in renewable energy produced in the consumption place (e.g., rooftop solar panels, solar water heaters, heat pumps, and wood heaters). EDF ENR operates in three ways:

- as a company with a business model focused on providing distributed energy systems; and
- as a holding company for EDF's distributed renewable energy subsidiaries and on the upstream of the photovoltaic: Supra, Ribo, Tenesol, Photon Power Technologies, Giordano, Gaïapac (joint venture with EDF ENR 50% and 50% Stiebel Eltron), a recently established joint venture with Imerys Terre Cuite (50/50) for the development of solar tiles.
- as an industrial partner in the development of new photovoltaic processes: Apollo Solar, PV Alliance and Nanosolar.

## **TENESOL**

EDF ENR controls 50% of the group Tenesol jointly with Total, which manufactures and markets, in the world, photovoltaic systems.

In Morocco, South Africa and Mali, Tenesol is present in companies of rural electrification to supply more than 80 000 homes in photovoltaic kit.

## **SUPRA**

Supra is 82.41% owned by EDF ENR, and manufactures fireplaces, wood stoves, and fireboxes sold under the Supra and Richard Le Droff brands.

EDF acquired the company out of a desire to expand its wood fuels business, as wood is the leading renewable energy source used in building construction.

## TIRU

TIRU is 51% owned by EDF, 25% by GDF Suez, and 24% by Veolia. It is involved in recycling waste into electricity and steam for the urban heating systems or industrial uses. A pioneer in renewable energy since its creation in 1922, it has always used environmentally-friendly methods for generating electricity. It operates mainly in benefits of local and inter-communal groups, as well as industrial partners. In 2007 (2008 data not yet having been published at the date of the filing of the present Document de Référence), the company's 22 biological treatment (anaerobic) and heat treatment (incineration) plants in France, Great Britain, Spain and Canada, transformed 4 million tonnes of waste into 560,000 MWh of electricity and 2,700,000 MWh of steam power. In France, green energy resulting from waste corresponds, in terms of generation volumes, to the second source of renewable energies, after hidropower.

TIRU's treatment plants help reduce greenhouse gas emissions by valuing the biomass (organic and plant waste) found, each day, in waste bins. Every tonne of household waste that TIRU recycles saves 0.2 tons of oil. Therefore the 4 million tonnes burned at its plants every year save 2.2 million barrels of oil. Furthermore, the recovery of waste is also, according to the process used, to sort and recycle metals (60,000 tons), clinkers (490,000 tons), and waste (170,000 tons). TIRU is one of EDF's subsidiaries devoted to promoting the use of renewable energy.

## PHOTON POWER TECHNOLOGIES

Photon Power Technologies is owned 51% by EDF ENR since the end of January 2009 (against 20% at end-December 2008). It operates through its 100% subsidiary Photon Technologies SAS, in the marketing and installation of photovoltaic systems for EDF ENR among residential customers and for its own account in the business market. It also owns, through its subsidiary Photon Power Industries, a stake in the Silpro project relating to the construction of a silicon plant purification in Provence.

With the current financial crisis and the lower demand for silicon, Silpro has faced significant financing difficulties, which ultimately forced it to seek and obtain its placement under administration (redressement judiciaire) on April 7, 2009.

## **RIBO**

Ribo is 100% owned by EDF ENR. It develops heating systems using air/air heat pumps for individual housing (new homes or in heavy renovation) and collective housing (rehabilitation of electric heating in the social sector).

## **GIORDANO**

EDF ENR owns 25% of the company, which operates mainly on solar thermal sector (solar water heaters).

## GAÏAPAC

This joint venture with Stielbel Eltron (50/50) produces high performance air / water heat pump, product that comes in place of oil or gas boilers in homes with a heating system hot water loop.

## JV EDF ENR - IMERYS

This joint venture with Imerys Terre Cuite (50/50) develops a solar tile system for its two shareholders.

#### 6.4.1.2 ELECTRICITÉ DE STRASBOURG

Electricité de Strasbourg is a French public limited company (Société Anonyme); EDF owns 89.07% of its shares which are traded on Eurolist by Euronext Paris. The remaining Electricité de Strasbourg shares are held by

Electricité de Strasbourg distributes electricity to 376 municipalities in the Bas-Rhin region, and has 376 concession agreements, renewed between 1993 and 1999 for a 40-year term, which serve approximately 80% of the population of the Bas-Rhin department. Due to its electricity distribution business, Electricité de Strasbourg is subject to legal and operating restrictions related to the opening up of the markets and therefore created an independent distribution network operator on January 1, 2004, within the integrated company.

In order to comply with the French Law requiring electricity companies with more than 100,000 customers to legally separate their grid operation and power supply businesses, Electricité de Strasbourg in June 2007 decided to set up a separate power supply subsidiary. This restructuration is in progress at the date of the filing of the Documents de Référence.

Electricité de Strasbourg sells electricity to approximately 470,000 customers. The company sold 6.6 TWh of electricity and 0.5 TWh of gas in 2008.

Electricité de Strasbourg, as a non-nationalized distributor, benefits from the specific purchase conditions (fixed by a specific tariff, called sale tariff) for its regulated customers. On the contrary, the other customers will be supplied under conditions following the energy market logic (by operating on the private market and on Powernext), being understood that for approximately 42% of its needs, Electricité de Strasbourg managed to enter into long term agreements to have access to generation.

Electricité de Strasbourg's management has implemented the company's 2008-2012 strategic development plan.

## 6.4.1.3 DALKIA

Dalkia is a leading European energy services provider, offering a full range of services with excellent coverage throughout France, as well as substantial operations across Europe. Dalkia and its subsidiaries generated a total of € 8,256.8 million of revenue (based on 100% of the revenues of Dalkia and its subsidiaries) in 2008 (source: the 2008 Dalkia annual report).

## DALKIA'S BUSINESSES

Dalkia helps companies use energy as efficiently as possible through a variety of energy management services, in areas such as heating and cooling systems, thermal and multi-technology applications, industrial utilities, installation and maintenance of generating equipment, full-service facilities management, and electrical services for public grids.

Dalkia also promotes renewable and alternative energies, including cogeneration, biomass, geothermal power, household waste incineration, and heat recovery systems from manufacturing processes.

## EDF'S STAKE IN DALKIA

At December 31, 2008, EDF owned 34% of the shares and voting rights of Dalkia's holding company, which is a simplified joint-stock company. EDF acquired this stake in December 2000 through transactions including an in-kind contribution to Dalkia of some of EDF's energy services subsidiaries. Veolia Environnement, a French company listed on Eurolist by Euronext and the NYSE stock exchange, owns the remaining 66% of Dalkia; EDF had a 3.87% stake in Veolia Environnement at December 31, 2008.

#### OWNERSHIP AGREEMENT

EDF and Veolia Environnement signed an ownership agreement for Dalkia on December 4, 2000, which was later modified on April 19, 2005. This agreement contains a change-of-control provision under which each party has the right to purchase the other's entire stake in Dalkia if the other were to be controlled by a third party competitor. The clause also gives the parties a preemptive right if Dalkia shares are sold to an outside buyer.

## **6.4.1.4 OTHER EQUITY INTERESTS**

In addition to interests in non-nationalized distributors (SMEG, Enercal, Electricité de Mayotte, and EDSB), the EDF group holds interests in industrial companies. These companies contribute, in their respective business sectors – generation, fuel, engineering – to the Group's objectives, and in particular the Generation and Engineering Division, ensuring the performance in the short and medium term of EDF France's generation asset portfolio. These companies are as follows:

- Cofiva, a holding company of the EDF group, which specializes in
- SAE, which specializes in fuel transmission and trading on behalf of the EDF
- Socodei, which specializes in the treatment of low-level waste; and
- FAHRENHEIT, acquired in June 2006, which provides maintenance and repair services for air conditioning and heating systems for the general public.

## 6.4.2 Natural gas businesses

EDF operates in the natural gas end-market mainly through EDF Energy (UK) EnBW (Germany) Edison (Italy) EDF Belgium (Belgium) and EDF (France) (see sections 6.3.1.1.2 ("EDF Energy"), 6.3.1.2 ("Germany - EnBW"), 6.3.1.3.1 ("Edison")). The Group also operates through EDF Trading, particularly in the wholesale natural gas market.

EDF's natural gas business supplied was 285 TWh<sup>1</sup> in 2008, placing it among the leading players in the European gas market in terms of volume handled. Approximately 60% of this was sold to customers, with the remaining 40% used within the company's own power plants to generate electricity.

## 6.4.2.1 REGULATIONS GOVERNING THE NATURAL GAS MARKET IN THE FU

Regulations governing the EU natural gas market are discussed in section 6.5.2, "Legislation relating to the gas market."

## 6.4.2.2 EDF'S STRATEGY FOR THE NATURAL GAS MARKET

The Group plans to continue expanding its natural gas businesses in France and across Europe. It intends to strengthen its position as a European-wide

The Group aims to obtain in time a 15% market share by volume of the natural gas sold to end users in the zone encompassing France, the UK, Germany, and Italy.

EDF's sales and marketing strategy in France consists of building the loyalty of its most profitable customers and enhancing the value of its customer

<sup>1</sup> Sales and self-consumption in electricity and/or heat generating plants of the companies EDF Energy, EnBW, Edison, EDF and BE ZRt (Hungary) are included for their total amount (100%) which means without taking into account the percentage of shareholding (including minority interests). The gas business of EDF-Trading and the sales of gas by Edison outside Italy are not taken into account in these figures.

portfolio, while remaining within the approach of the "Grenelle de l'Environment", by:

- targeting high-value customers;
- offering dual electricity and gas products, in which customers have expressed an interest: and
- capitalizing on its practise, such as the "Bleu Ciel d'EDF" brand for residential customers in France.

The natural gas sales in France have reached approximately 19 TWh in 2008, an annual growth of 7%. As of December 31, 2008, approximately 417,900 residential customers and key accounts had chosen EDF as gas supplier.

The company has adopted a more aggressive approach to enter the German, Italian, and UK markets. In Belgium, EDF has not been selected to acquire Distrigas and given the exercice by Centrica of its preemption right, the Group was unable to acquire the participation of Gaz de France in SPE. Gas sales continued to grow through EDF Belgium. In the Netherlands, EDF is working with Delta to develop a combined-cycle natural gas plant.

In order to support the growth of its gas business, the Group intends to secure its supply through a diversified, reliable, and flexible set of purchase contracts and physical assets, related to both natural gas (reserves and purchase agreements) and logistics capacity (pipelines, LNG chain infrastructures and storage).

The Group has decided to complement Edison's existing projects in southern and eastern Europe with new projects carried out by its various entities in northwestern Europe. These projects, some already underway and others planned for the future, are designed to allow the Group to negotiate with producers directly to make it less reliant on its rivals for supply and make its services more competitive. They should also expand the scope for synergies within the Group in terms of managing its upstream<sup>1</sup> and downstream<sup>2</sup> operations more efficiently. In addition, handling bigger volumes will give EDF greater negotiating power with large suppliers.

Faced with strong uncertainties both on the future gas demand and the availability of gas to the medium-term horizon, EDF intends to propose to gaz producers innovative partnerships based on its expertise and know-how. With this in mind, EDF and the Qatar government, signed on January 14, 2008, a protocol agreement to work together on energy-related initiatives. Through this agreement, the world's largest LNG producer and the world's leading nuclear energy company will join forces to explore issues related to the use of civil nuclear energy and renewable energy. In addition, EDF and Qatar Petroleum International plan to take joint interests in natural gas projects carried out by EDF in Europe, and in long-term partnerships to research other opportunities. This partnership complements the existing relations between Qatar and the EDF group relating to LNG terminals of Rovigo and Zeebrugge.

## 6.4.2.3 SECURING NATURAL GAS SUPPLIES

In order to secure its supplies, EDF has diversified its portfolio of supply and based on purchase contracts long, medium and short term, on the production of gas and on interventions in the wholesale markets through the support of EDF Trading. In parallel, it has a variety of contractual rights, directly or through EDF Trading, in pipelines project (in particular Netherlands and Belgium) and existing pipelines (interconnection between the UK and Belgium for example) and for the unloading of LNG cargoes in the LNG terminal of Montoir de Bretagne, Zeebrugge and in the future LNG terminal at Fos Cavaou.

In 2008, EDF has extended its portfolio of gas purchase contracts by the signing of a supply agreement of LNG on an annual volume of 1 Gm<sup>3</sup> from April 2009, with the Spanish group Gas Natural. On December 18, 2008, EDF has made its first acquisition of gas assets by signing with ATP Oil & Gas UK, a subsidiary of the American oil company ATP Oil & Gas Corporation (ATPG), an agreement for the acquisition of its shares in gas assets in the British North Sea. The total volume of reserves is estimated at around 3 billion m<sup>3</sup>. Finally, in October 30, 2008, EDF Trading has acquired Eagle Energy Partners, an active company in gas trading in the United States, enabling the Group to lay the groundwork for a presence overseas.

The Group is continuing to build a portfolio of natural gas businesses with a focus on two regions: Northwestern Europe and Southern Europe.

• Recent developments in Northwestern Europe

Following the 2007 public debate, EDF confirmed in July 2008 the continuation of studies for the project of LNG terminal in Dunkirk, which was initiated in 2006. On this occasion, the scope of land-based facilities has been redefined in order to minimize the impact on the ecosystem and preserve the local fauna and flora. The progress made in terms of studies helped to refine the annual capacity of the terminal with a target of 9 to 10 Gm<sup>3</sup> for Phase 1 which is expected to be operational by 2014.

In Germany, EDF and EnBW pursue the joint development of their project storage in salt caverns at Etzel for a volume of approximately 0.4 Gm<sup>3</sup>. The commissioning of the first cavity is scheduled for late 2011.

Recent developments in Southern Europe

The structure of the offshore LNG terminal of Rovigo should be used by Edison since its commissioning in 2009 to a volume of gas from Qatar for 6.4 billion m<sup>3</sup> per year for 25 years.

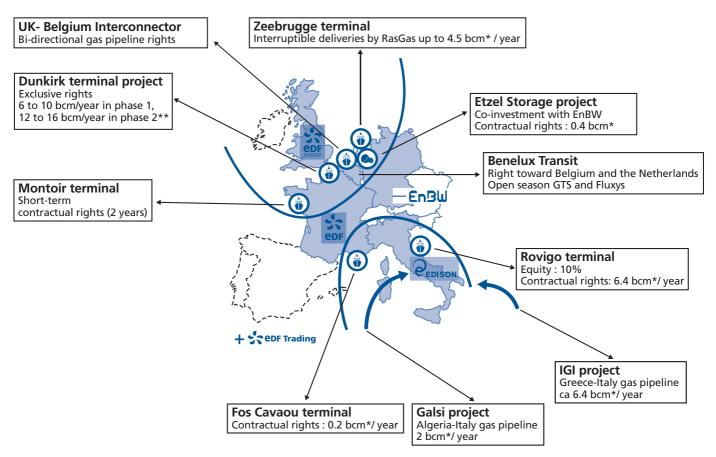
Edison is also involved in two pipeline projects: IGI between Greece and Italy (8 Gm³/year) and Galsi (8 Gm³/year total capacity) between Algeria and Italy.

After third parties were given the right to use the Fos Cavaou LNG terminal, EDF, Distrigaz SA, ENI Spa, and Essent Energy Trading BV formed a consortium in June 2007 (for which EDF served as the bidder) in order to reserve 0.825 Gm³ of the capacity that will be freed for three years. EDF will be able to use 0.2 Gm<sup>3</sup>/year under the consortium arrangement. Originally scheduled to open in 2008, it has been delayed by the developers of the project.

<sup>1</sup> Gas production, purchasing agreements, delivery, load matching, and purchases on the wholesale

<sup>2</sup> Contracts to supply end customers and power plants, and sales on the wholesale market.

## PROGRESS IN IMPLEMENTING THE NATURAL GAS STRATEGY



<sup>\*</sup>Rights owned by EDF or its subsidiaries

## 6.4.3 Sustainable development policy and public service

For many years, the EDF group has taken all aspects of environmental and social issues into consideration. An early adherent of sustainable development initiatives, EDF now treats these efforts as a major part of its global strategy. This commitment to Sustainable Development is firmly established and is continually being strengthened. During 2008, the Group formalized its initiative, supporting a Sustainable Development policy that responds to the company's major challenges. This initiative has been translated into an environmental policy that is focused on the struggle against climate change and the protection of biodiversity, as well as a company policy that emphasizes access to energy, regional responsibility, and the public's acceptance of EDF business activities. In addition, this initiative is supported by a renewed commitment to the ethics action plan inaugurated in 2007 and the principles of governance adapted to the Group's development.

## 6.4.3.1 ETHICS AND GOVERNANCE: EDF'S COMMITMENT TO SUSTAINABLE DEVELOPMENT

## 6.4.3.1.1 COMMITMENT TO SUSTAINABLE DEVELOPMENT

In 2001, the Group launched its Sustainable Development action plan "Agenda 21," committing itself to respect the ten principles of human rights, labor standards, environmental protection, and the struggle against corruption formulated in the Global Compact initiated by the United Nations.

In 2003, after a process of dialogue and consultation with employees and subsidiaries, the Group's ethical approach led to a commitment to respect the five core business values that constitute the values of Sustainable Development: respect for the individual, environmental responsibility, efficiency, commitment to solidarity, and insistence on integrity. At the end of 2007 the "Ethical Agenda," a new set of guidelines established by EDF that compiles into a single document (i) the company's initiatives and (ii) guidelines for individual conduct, was disseminated and a copy was sent individually to every employee. To strengthen this ethical framework, each operational department is required to appoint an Ethical Correspondent who is responsible for assisting management in promoting the company's values and helping the concrete implementation of commitments to respect individual rights and solidarity. This Ethical Correspondent is part of a local network linked to the ethical alert plan which is controlled centrally by the Ethics Director.

Since October 2008, the Group's commitment to Sustainable Development has been incorporated into a full Sustainable Development policy, which can be broken down into three areas with the following priority objectives:

1. On the environmental front, the EDF group intends to remain the lowest emitter of CO<sub>2</sub> and greenhouse gases among the large European energy companies, to adapt its plants and its product and service offers to the effects of climate change, and to reduce its environmental impact, particularly on biodiversity.

<sup>\*\*</sup> Total project capacity

- 2. On the social front, the Group wishes to facilitate access to energy and eco-efficiency, maintain and develop its commitments to regions where it operates, and improve the understanding and sharing of major challenges in energy, the environment and society.
- 3. In the area of corporate governance and communications, the Group's objective is to make its dialogue with internal and external stakeholders a means of broadening and deepening the rationales and criteria for its actions, and to assess and report on its activities and performance vis-à-vis established goals and expectations of its stakeholders, as well as contributing to the debate on Sustainable Development on the national and international level.

This Group Sustainable Development policy also constitutes the framework for more specific commitments:

- in France, the public service agreement (Contrat de Service Public, CSP) summarizes the commitments and goals that a distributor, transmitter, and supplier of energy must achieve as part of the public service obligations imposed on it by the government (see section 6.4.3.4 ("Public service in France"));
- the three-years Group's Corporate Social Responsibility agreement with employee representatives, signed on January 24, 2005. This agreement provides for ethical, social, environmental and corporate commitments and monitoring for employees of all entities in the Group that are signatories;
- the environmental policy adopted in June 2005 and the biodiversity policy adopted in May 2006 have been included and stipulated within the framework of the Group's Sustainable Development policy as from October 2008. This also applies to the corporate policy established in November 2007;
- on the social front, in September 2006 EDF endorsed the National Diversity Charter. In October 2006, under its corporate social responsibility agreement, a three-year socially responsible subcontracting agreement was signed to ensure that all purchasing conforms to ethical and corporate responsibility criteria (see section 17.5 ("Equal opportunity")).

## 6.4.3.1.2 TOOLS FOR IMPLEMENTING SUSTAINABLE **DEVELOPMENT**

Implementing the commitment to Sustainable Development is a primary managerial focus which permeates all areas of our business and every specialist activity.

The Group has a Sustainable Development Department dedicated to stimulating, coordinating and supporting all actions taken by the Group's Divisions and companies to implement our Sustainable Development policy commitments and report the results. A Sustainable Committee established at the end of 2008, brings together the staff members responsible for Sustainable Development in the Group's major companies with the remit of assuring the implementation of the Group's policy and seeking to coordinate initiatives, while respecting the autonomy of each of the Group's constituents.

The implementation and monitoring of the corporate social responsibility agreement is assured primarily by an annual review and a discussion committee at the Group level (see section 17.6.3 ("Social dialogue and representation of Group employees")).

The Group also has an environmental management system (EMS) that applies to all Group units. In 2002 EDF was granted ISO 14001 certification, which was renewed in 2008 for a further three years. In 2006 the EMS was streamlined so that all actions, objectives and indicators could be harmonized with the Group's environmental policy commitments, guided by an executive committee and theme-based groups. It is worth noting that half of the Group's contribution to profit sharing granted to EDF employees depends on reaching EMS targets, which specify 6 specific criteria for achieving ethical, environmental and social objectives.

Before being submitted to the Commitments and Holdings Committee, the Group's main projects are reviewed to ensure as far as possible that they do not conflict with our Sustainable Development commitments.

## 6.4.3.1.3 DIALOGUE, TRANSPARENCY, EVALUATION

The implementation of a range of approaches to allow exchanges of views and quality dialogue with all stakeholders is an essential element in the EDF group's Sustainable Development policy. Each of the Group's companies arranges these exchanges in the most appropriate manner, within their socio-economic framework, for the relationships they plan to develop. For EDF in France, this dialogue occurs at the level of industrial sites (through liaison and information committees, for example), as well as in partnerships with non-governmental organizations.

At the central level, in 2008 the Group continued its dialogues with outside independent experts, who specialize in areas related to the Group's activities or represent the expectations and interests of society. The Sustainable Development panel, chaired by an outside expert, has a consultative role in Group planning and critically assesses how EDF fulfils its commitment to Sustainable Development.

This commitment to Sustainable Development is also a commitment to transparency for stakeholders, which means regular reporting to the Board of Directors, primarily in connection with the annual business report and the Sustainable Development Report. This reporting follows indicators derived with reference to the criteria in the Global Reporting Initiative. The Group is now asking its statutory auditors to monitor the quality of these non-financial indicators. For the fiscal year 2008, the College of Auditors has issued a "moderate assurance" attestation on the data of the entities audited.

The Group publishes Sustainable Development reports that are used as a basis for assessment by rating agencies and non-financial analysis departments acting on behalf of investors. In 2005 EDF was listed on the ASPI, an "ethical index" prepared by the French rating agency Vigeo that evaluates 120 corporations based on their Sustainable Development performance.

## **6.4.3.2 ENVIRONMENTAL POLICY**

In the Sustainable Development policy that it formalized in October 2008, the EDF group sets out to be ambitious and a trail-blazer in environmental protection, and it has prepared an environmental policy that is focused primarily on the struggle against climate change and the control of its environmental impacts, particularly on biodiversity.

## **6.4.3.2.1** CONTRIBUTING TO THE STRUGGLE AGAINST **CLIMATE CHANGE**

A low emitter of CO<sub>2</sub> because a significant number of its plants are nuclear or hydropower, the EDF group is committed to remaining the leader among electricity companies in the struggle against climate change and the reduction of greenhouse gas emissions. It has subscribed to the European objective of reducing CO<sub>2</sub> emissions to 20% below 1990 levels by 2020, while taking into consideration the variety of local energy situations. The goal of remaining among the seven major European generators while still being the lowest CO<sub>2</sub> emitting electricity company by kWh produced is feasible due to the optimized operation of its existing generating facilities and the significant renewal of its fleet. At the same time, the Group is seeking to help its customers reduce their own CO<sub>2</sub> emissions by creating and promoting eco-efficient product offers and providing advice on a rational

use of energy. A plan to reduce emissions from EDF's buildings and vehicle fleets is also in preparation, as well as a program to mobilize all staff in the struggle against climate change. Each of the Group's companies will have its own strategy, conforming to the Group's overall strategy but adapted to its activities and the energy context in which it operates.

## $6.4.3.2.1.1~{\rm Reducing}~{\rm CO_2}$ emissions in the Group's industrial FACILITIES, PARTICULARLY GENERATING PLANTS

The EDF group is Europe's biggest energy producer, but, due to the high proportion generated from nuclear and hydropower sources in its generation mix, it also has one of the lowest rates of  ${\rm CO_2}$  emissions. In France, 95% of electricity generation emits no  ${\rm CO_2}$ , keeping its specific emission rate to less than 50g of CO<sub>2</sub>/kWh while the European average is approximately 400g of CO<sub>2</sub>/kWh. The EDF group's specific emissions rate at a global level was 133g of CO<sub>2</sub>/kWh in 2008 (EDF estimates).

EDF has a number of tools for reducing its greenhouse gas emissions, for example, in the short term, optimizing its current plants, factoring in carbon costs when ranking generating methods, and improving the operating efficiency of its plants. Over the longer term, the most important tools are modifications to generating equipment (modernizing power stations, conserving hydroelectric potential, developing renewable energy resources and minimizing the most polluting methods).

The development of renewable sources of energy is at the heart of the EDF group's strategy: the aim is to develop the renewable energy sector in a sustainable and profitable manner in Europe and worldwide through the industrial management of mature plants, the drive for technological innovation in areas that are still under development (for example, sea-based energy), and the undertaking of research programs to facilitate the integration of these energy sources with distribution and transport networks.

These developments include both centralized power generation projects (like the construction of the Nam Theun 2 hydroelectric power plant in Laos) and also decentralized approaches, helping customers produce energy where it is consumed. The EDF group is also focusing on photovoltaic energy throughout the value chain: investments in research on silicon technology, manufacture of panels by the subsidiary Tenesol, construction of groundbased solar power systems, and the introduction of photovoltaic offers.

## 6.4.3.2.1.2 Promoting eco-efficient energy and efficient usage OF ELECTRICITY TO CUSTOMERS

EDF has resolved to make eco-efficiency its primary point of reference in offers provided to customers.

The solutions developed and marketed by EDF are firmly based on energyefficient equipment and the use of renewable energy in buildings, as well as encouraging efficient use of energy resources.

These solutions consist primarily of:

- offers of energy demand management (EDM) services (insulation, building
- a concentrated effort to use new distributed energies for heat production in buildings (heat pumps, solar water heaters, wood burning stoves and
- developing decentralized electricity generation (photovoltaic energy);
- managing the load curve to cut back or limit consumption of energy from CO<sub>2</sub> emitting sources during "non-peak" periods;
- using "smart meters" to optimize the networks and perform remote measuring and remote actions to reduce greenhouse gas emissions;
- offering customers the option of consuming non-CO<sub>2</sub>-emitting "green"

energy or selecting "carbon" offers that are partially offset.

These offers from the Customer Division's marketing network are tied to the supply of equipment and performance of work by the Group's specialized subsidiaries, supported by an extensive network of partners.

## 6.4.3.2.1.3 Reducing $CO_2$ emissions from our buildings and **BUSINESS TRAVEL**

In addition to the direct emissions from its industrial facilities, EDF is committed to reducing the emissions from its service buildings, vehicle fleets, and business travel. EDF has also initiated an energy demand management (EDM) program for the Group's employees.

EDF's commitment to the struggle against climate change also applies to service buildings occupied by its employees. This undertaking applies both to properties that it owns and those it rents.

The success of the Group's internal challenge, "The Sustainable Development Prizes", aimed at encouraging innovative ideas, is evidence of the commitment of many employees to this endeavour. This mobilization is based on a number of awareness initiatives (particularly fostering exemplary behavior in both the home and the workplace) and on the Sustainable Development criteria included in the profit sharing plan.

## 6.4.3.2.1.4 ADAPTING TO CLIMATE CHANGE

Since climate change has an impact on its generation, distribution and transport activities, as well as on the demand for energy, the EDF group is duty bound to adopt a strategy for adapting to climate change during 2009.

## 6.4.3.2.2 CONTROLLING THE ENVIRONMENTAL AND HEALTH IMPACTS OF THE GROUP'S ACTIVITIES AND FACILITIES, PARTICULARLY WITH REGARD TO BIODIVERSITY

By setting up an EMS (environmental management system), EDF is not only complying with regulations but also demonstrating its resolve to continually improve practice and performance so as to protect both the public and the environment

## 6.4.3.2.2.1 Managing the development and operation of nuclear POWER PLANTS IN FRANCE

One of the challenges of the EDF group's Sustainable Development policy is to maintain the balance between nuclear and renewable energy sources. Faced with the major challenges of securing sources of supply, the struggle against climate change, and the control of energy costs, nuclear power is one of the solutions whereby energy requirements can be reconciled with Sustainable Development demands. Nevertheless, acceptance of nuclear power varies among the countries where the Group has entities, subsidiaries and investments. The EDF group must therefore contribute to providing answers to questions that have been raised by public authorities about the role of nuclear power in the energy mix, while taking due account of all the impacts of this sector, from upstream uranium extraction to waste management and decommissioning of downstream sites (see section 6.2.1.1.3 ("Nuclear generation")).

Safety is the EDF group's priority in operating these facilities. It is taken into account in structural design, and is consistently monitored with the policy of motivating personnel and making major investments. The security of nuclear facilities is supervised by the National Safety Authority (Autorité de Sûreté Nucléaire, ASN).

The management of radioactive effluents (liquid and gas) from nuclear power stations is subject to strict regulation, and the Group's environmental policy expresses a firm resolve to limit the environmental and health

impacts of its plants. Effective waste management depends not only on the efficiency of effluent treatment systems but also on operating methods.

Adjustments to the design and operation have allowed the achievement of a very low baseline with regard to radioactive waste.

Following this initiative that has been implemented to manage radioactive effluents, the Group is now doing the same for chemical waste. Water cooling tertiary circuits are receiving particular attention owing to the high flow rates involved. In particular, biocide treatments are proving effective in controlling microorganisms in these circuits.

Over and above monitoring its own plants, EDF also monitors the environment so as to measure the impact of its operations. The monitoring takes the form of radioecological and hydrobiological studies by independent laboratories and universities.

## 6.4.3.2.2.2 Managing the impact of coal and gas-fired power STATIONS IN FRANCE

The growth of renewable and nuclear energy in various countries' energy generation mix should allow a reduction in use of conventional coal and gas-fired plants and thus lower consumption of fossil fuels (coal, fuel oil and gas). However, the role of traditional plants remains significant, even in France, where nuclear energy and hydropower play a predominant role. Coal and gas-fired plants do still play an essential role in matching electricity generation to consumption in real time, allowing more rapid response to fluctuations in demand, unexpected peaks in consumption throughout the year, and during cold snaps.

The environmental efficiency of the existing coal and gas-fired power stations has improved steadily in response to tighter requirements arising from successive amendments to regulations. Investment programs combine both demands for improvements in air quality and the reduction of atmospheric emissions, as well as regulations pertaining to the reduction of greenhouse gases.

In 10 years, atmospheric emissions from EDF's coal and gas-fired plants in France have been reduced by approximately 50%. The net result of the measures taken (installing combustion gas denitrification equipment, strengthening dust filters, changing to different fuels, optimizing combustion, etc.) is a significant reduction in specific emissions and a drop in the overall volume of emissions of SO<sub>2</sub>, NO<sub>x</sub>, and dust per unit of electricity generated, complying with the two-stage implementation of the GIC directive on January 1, 2008, and January 1, 2016 (see section 6.5.4.3 ("Regulations applicable to other EDF group generation methods")).

The Group is upgrading and adapting its existing plants with new investments, which make use of the best available technologies in the areas of energy efficiency, combustion, and techniques for the removal of pollutants (supercritical coal technology in Germany, and combined cycle gas plants in France, Italy and the United Kingdom).

## 6.4.3.2.2.3 MANAGING THE IMPACT OF HYDROELECTRIC FACILITIES

For many years, the EDF group has been committed to strengthening its role in water management, improving its knowledge of ecosystems, and reducing still further the impact of its activities on the environment by ensuring that ecology and sediments remain as far as possible unaffected.

The new French program for opening concessions for the management of hydropower schemes to competitive bidding challenges operators, including EDF, to develop operating methods that could further improve the balance between energy generation, other uses for water and respect for the environment, particularly the coordinated management of catchment areas (it is a matter of coordinating the management of hydropower plants along the same watercourse).

## 6.4.3.2.2.4 OTHER IMPACTS (WASTE, SOIL POLLUTION)

The Group's industrial activities may result in soil pollution. A Group-internal project to efficiently manage these issues across all of the Group's sites is being implemented in four stages: making an inventory of sites (in the process of completion for EDF), reconstructing the history of each site to identify which ones may potentially be polluted, soil analyses with priority being given to sensitive areas, which are monitored so as to control sources of pollution and develop a management plan; and finally their potential rehabilitation depending on future use and regulatory requirements.

European Directive 96/59/EC of September 16, 1996, requires all member States to eliminate equipment containing PCBs or PCTs with a concentration exceeding 500 ppm by the end of 2010. Each of the Group's companies has committed to and is following its own elimination plan aimed at complying with this Directive as transposed into French law.

EDF publishes an annual review of its management of conventional industrial waste arising from production activities and Research.

## 6.4.3.2.2.5 Managing emergencies and urgent threats TO THE ENVIRONMENT

In order to control the risk of industrial accidents and damage to the natural world or public health, each of the Group's companies identifies potential events that could have an environmental impact, manages potentially urgent situations, and carries out appropriate crisis management exercises. A centralized organization allows crisis situations to be managed at Group level and necessary information to be provided to governmental agencies and the media. Intervention processes are regularly reviewed and improved as a result.

## **6.4.3.2.3** CONSERVING BIODIVERSITY

Like the struggle against climate change, conserving biodiversity is now seen as a major priority in protecting the environment on a global level, alongside the struggle against climate change.

As a generator and distributor of energy, the EDF group is both a user of and dependent on unspoiled terrestrial and aquatic environments.

Because the EDF group benefits from its interaction with these areas and resources, and also because of the impact on its activities of damage caused by other agencies, the Group is directly affected by the challenge of conserving biodiversity.

Since it began operating its first generation facilities, EDF has striven to better understand the impacts and apply measures to avoid or offset them; for example, since the beginning of the 1980s, EDF has worked to restore major fish migration routes, specifically by investing in research and design of fish ladders.

Against a backdrop of rapid regulatory change, many initiatives relating to unspoiled and wilderness areas have been implemented by all EDF group entities. To ensure consistency among these initiatives, responsibility for biodiversity conservation has been structured around the biodiversity policy signed in May 2006 and implemented within the Group's Environmental Management System.

This policy is based on three main lines of action - understanding, conservation, and awareness - each of which is supplemented by the work of the EDF "Diversiterre" Foundation. EDF relies on its partnerships with non-

governmental organizations, universities, and research laboratories. In 2008, EDF renewed its partnerships with French Nature Reserves (Réserves Naturelles de France/RNF), the Coastal Protection Agency (Conservatoire du Littoral), the Nicolas Hulot Foundation for Man and Nature (Fondation Nicolas Hulot pour la Nature et l'Homme/FNH), and signed new partnerships with the Bird Protection League (Ligue pour la Protection des Oiseaux/LPO) and the French committee of the International Union for Conservation of Nature.

EDF also runs biodiversity projects to raise awareness among the general public, schools and local councillors, including, for example, its commitment to the 2008 Fête de la Nature.

## 6.4.3.2.4 ONGOING RESEARCH AND DEVELOPMENT

A significant portion of the R&D budget is dedicated to technologies that do not produce CO<sub>2</sub> emissions.

R&D projects dedicated to the environment cover the full range of upstream and downstream issues relating to electricity, including:

- analysis of the techniques for the capture and catchment of CO<sub>2</sub>, preparing for future demonstrators (prototypes that allow validation of research);
- nuclear technologies: Generation IV reactors that will ultimately replace the EPR type, and geologic storage of radioactive wastes;
- new generation technologies: micro-cogeneration, fuel cell batteries, tidal turbine system, new solar energy technologies, and biomass gasification;
- smart network management to allow better integration of centralized generation and distributed energy;
- electricity storage capacity to ensure continuity of supply at peak consumption points and cope with the intermittent output of certain renewable energy sources;
- efficient use of electricity, and of energy in general, e.g. by improving the performance of heat pumps (high temperature), electric vehicles, and the rechargeable hybrid vehicles being tested on EDF sites in partnership with Toyota.

## **6.4.3.3 SOCIAL POLICIES**

## **6.4.3.3.1** MAIN CONCERNS

EDF strongly believes that improving its efficiency in the environmental and social arenas is integral to its financial success.

Accordingly, in 2007 EDF introduced a new social policy at Group level to create and enhance ties with outside stakeholders, optimize and strengthen communication with vulnerable customers, and invigorate internal communication.

This policy takes into account, supports, and reinforces existing action plans, ensuring that they are harmonized within the Group. Its guidelines reflect those of the UN Global Compact and are an integral part of the corporate social responsibility agreement and the public service agreement.

## **6.4.3.3.2** STRATEGIES

The EDF group's social policy takes into account the diversity of the stakeholders it deals with (vulnerable customers, jobseekers, disabled persons, etc.). It contributes to promoting eco-efficient energy. It also seeks to facilitate access to energy and improve living and working conditions, and contributes to promoting training initiatives in keeping with the needs of the Group and its partners.

The main strategies of the EDF group's social policy are:

• to facilitate access to energy and energy eco-efficiency. The EDF group is developing eco-efficient solutions to reduce energy insecurity by participating in the introduction of products that facilitate access to energy and by

- being responsive to the specific needs of vulnerable clients in the event of a power outage;
- to forge and maintain closer links with communities where the Group operates, by supporting local development projects, particularly in the housing sector, and by offering employment to vulnerable individuals in the construction and environmental fields;
- to contribute to educational efforts on major energy issues, encouraging international debate on the social issues related to energy and by including approaches to energy efficiency in its information and training programs.

All personnel at Group level are informed of developments in social policies, and there is an ongoing dialogue on the subject.

## **6.4.3.4 PUBLIC SERVICE IN FRANCE**

#### LEGAL DEFINITION OF PUBLIC SERVICE IN FRANCE

The fundamental principles of public service (mutability, continuity and equal access) are set forth in Law n° 2000-108 of February 10, 2000, on the modernization and development of the public electricity service (see section 6.5.1.2 ("French legislation") below for a description of this regulation).

## THE PUBLIC SERVICE AGREEMENT (CSP)

A public service agreement between the State and EDF was signed as required by Article 1 of the Law of August 9, 2004. It establishes the duties of the EDF group and the State for the period 2005-2007 and the compensation mechanisms for public service work (i.e., an integrated tariff system and TURPE). This agreement remains in force pending the signature of a new agreement (currently under negotiation), in accordance with its own stipulations.

## PURPOSE OF THE PUBLIC SERVICE AGREEMENT

This agreement is intended to guarantee public electricity service in an electricity market that is open to competition and in which EDF is active, particularly in France.

## MULTI-YEAR EVOLUTION OF ELECTRICITY SALES TARIFFS

In accordance with Article 1 of the Law of August 9, 2004, one of the commitments in the public service contract relates to the multiyear evolution of electricity sales tariffs. In accordance with Article 4 of the French Law of February 10, 2000, the sales tariffs for non-eligible customers and eligible customers that have not exercised their eligibility remain regulated. Article 4 specifies that such prices must cover "the total costs incurred (...) by EDF and the non-nationalized distributors".

Within the framework of these provisions, the French State and EDF have agreed in the new public service contract on the need to progressively modify the integrated tariffs so that the general structure of sale tariffs and the structure that is specific to certain price options reflect the cost structure.

Regulated tariffs were increased by 2% (Blue tariff), and 6% and 8% (Yellow and Green tariffs) on August 15, 2008. The 2% increase applicable to residential customers is below inflation (3.6% year to year from July 2007 to June 2008). This 2% increase complies with the public service agreement entered into between EDF and the French state on October 24, 2005, which guarantees that the increase of the electricity sales tariffs for residential customers will not exceed the inflation rate over the first five years.

## **OBLIGATIONS OF EDF (OUTSIDE NETWORK MANAGEMENT)**

EDF's public service obligations relate to:

- Access to the public electricity service and supply of electricity to customers who elect to remain under regulated tariffs. This primarily entails an obli-
  - supply electricity to customers who have elected to remain under regulated tariffs and energy demand management. These duties are financed by the integrated tariff;
  - promote social cohesion. Conditions for reimbursement by the CSPE of the costs arising from this duty and the integrated tariff are set forth in the Law of February 10, 2000;
- provide access to the public service. This is financed by the integrated tariff and the TURPE.
- Generation and supply, including an obligation:
  - to implement an energy policy (programming investment over several years and helping reach targets; demand-side management, energy saving certificates, etc.);
- to continue generating electricity safely while protecting the environment.
- EDF will generate the resources required for these commitments with revenues from the integrated tariff or by selling electricity to customers having exercised their eligibility rights or on the open market.
- Contributing to the security of the electricity network. EDF has undertaken to make various agreements with RTE-EDF Transport governing the optimization of work on generation equipment and the availability of necessary resources to keep the network in good working order.

## **OBLIGATIONS OF THE NETWORK MANAGERS**

The network operators, ERDF and RTE-EDF Transport, have undertaken

obligations in the public service contract with respect to the management of the public networks and the safety of the electricity system. These obligations are financed by the network usage tariff.

These commitments relate, in particular, to network security, quality of supply, the safety of third parties and the protection of the environment, which are four areas where the expectations of customers and local authorities are particularly high.

## MONITORING THE PUBLIC SERVICE CONTRACT

The public service contract entered into between the French government and EDF in 2005 is monitored year on year by the parties. The Monitoring Committee met for the first time in June 2006 in order to examine the 2005 report on commitments undertaken by EDF and the government. In Autumn 2006, this report was presented to the governing bodies of EDF and RTE-EDF Transport (strategic committee of the EDF Board of Directors and the Supervisory Board of RTE-EDF Transport). The results of this first report were positive: they were found to meet the quantitative goals and quality commitments of EDF and guaranteed the expected level of public service with regard to management of the distribution and transmission networks, social and territorial cohesion, and contributions to the national energy policy. The 2006 follow-up was discussed at a number of preliminary meetings between the French State and EDF in 2007. There was a follow-up meeting between the parties in January 2008. A 2005-2007 report has been prepared and submitted to government departments. A second follow-up meeting between the parties took place on May 30, 2008. EDF, along with ERDF and RTE-EDF Transport, have begun work in collaboration with the government to draw up a new public service contract.

# 6.5

## Legislative and regulatory environment

The EDF group entities are subject to various regulations in relation to their business. In particular, EDF is subject to the European legislation applicable to the electricity and gas markets, which has been transposed into French Law. EDF is also subject in particular to the regulations governing electricity distribution concessions and to the applicable environmental, nuclear and safety regulations.

The following discussion of legal and regulatory provisions is not an exhaustive description of all the legal and regulatory provisions applicable to the EDF group.

## 6.5.1 Legislation relating to the electricity market

## **6.5.1.1 EUROPEAN LEGISLATION**

The European directive no 96/92/EC of the European Parliament and the European Council, dated December 19, 1996, relating to common rules for the domestic electricity market was the starting point for opening up the electricity market to competition.

This directive, which stated in particular the principle of the eligibility of the most important industrial customers, was repealed by the Directive no 2003/54/EC of June 26, 2003 which set out common rules applicable to electricity generation, transmission, distribution and supply and which is the basis of the current French regulation of the electricity market.

This directive sets out arrangements for the organization and operation of the electricity sector, the rules concerning access to the market, the criteria and procedures applicable to tendering exercises and the granting of licenses, as well as public transmission and distribution network operations.

## **OPENING UP THE MARKET**

The European directive of June 2003 sets out a timetable for opening up the electricity market to competition. All non-household customers, i.e., private individuals or legal entities purchasing electricity not intended for their personal domestic use, including generators and wholesalers, became eligible customers as of July 1, 2004.

With effect from July 1, 2007, all customers, including household customers, will be considered as eligible.

## INVESTIGATIONS CONCERNING THE ENERGY SECTOR

The European Commission announced, on June 13, 2005, a sector investigation, pursuant to Article 17 of (EC) regulation n° 1/2003, in order to identify any possible distortions to competition and dysfunctionings whether behavioral or structural in the gas and electricity markets. This investigation came as an addition to the monitoring that is currently in place and

conducted by the European Commission to ensure the application of European legislation related to energy, as well as in addition to a detailed report on the energy market, dated November 15, 2005.

On January 10, 2007 the European Commission published its "Final Report" and suggested an integrated group of measures for the 21st century concerning the energy field and climate change. This report includes, in particular, a presentation of the perspectives in relation to the European gas and electricity market.

## ACCOUNTING DISSOCIATION AND TRANSPARENCY **OF ACCOUNTING**

The European directive of June 26, 2003 stipulates that electricity companies must have their annual accounts audited and published in accordance with national regulations relating to the annual accounts of corporations and that, pursuant to the principle of accounting dissociation, they must prepare separate accounts for each of their transmission and distribution businesses. Until July 1, 2007, they must also keep separate accounts for their businesses supplying eligible customers and their businesses supplying non-eligible customers. As of July 1, 2007, such companies are required by article 25 of the Law of February 10, 2000 as amended by article 13 of the Law of December 7, 2006 to hold an internal accounting that distinguishes the supply to customers having exercised their eligibility rights from the supply to customers under regulated tariffs.

Member States or any other duly appointed authority will have a right of access to the electricity companies' accounts.

## **DIRECT LINES**

Member States must implement the necessary measures to allow (i) all electricity generators and all electricity supply companies to supply, by means of a direct line, their own establishments, subsidiaries and eligible customers, and (ii) any eligible customer to be supplied with electricity through a direct line by a generator and supply companies.

## REGULATION (EC) Nº 1228/2003 OF JUNE 26, 2003

Regulation (EC) n° 1228/2003 of the European Parliament and the European Council of June 26, 2003 relating to the conditions of access to the network for cross-border electricity exchanges was passed in order to amend the European directive of June 26, 2003. The provisions of this regulation became effective on July 1, 2004.

This regulation provides, in particular, for a compensation mechanism between transmission system operators for the costs occasioned by accepting cross-border electricity flows on their networks. This compensation is paid by the national transmission system operators who operate the networks where the cross-border flows originate and the networks where these flows end.

In addition, it sets forth the principle of transparency for access charges to the networks, which also take into account the need to guarantee the security of the networks and reflect the costs effectively incurred.

Within the framework of the third "Energy Package" introduced on September 19, 2007, the Commission has proposed to modify the regulation 1228/2003 (see section 6.5.4.5.1.1 (" The "Energy and climate change package"") below).

## DIRECTIVE 2005/89/EC ON SECURITY OF ELECTRICITY SUPPLY DATED JANUARY 18, 2006

The directive (n° 2005/89/EC) on security of electricity supply, adopted on January 18, 2006, aims at better defining the responsibilities of various parties, ensuring that minimum operation norms are respected, keeping an equilibrium between demand and supply, and finally directing investments towards the networks. The challenge for EDF is to reinforce the legal regime in force, and to promote the development of interconnections.

## EUROPEAN COMMISSION RECOMMENDATION ON "FINANCIAL RESOURCES FOR THE DECOMMISSIONING" DATED OCTOBER 24, 2006

EDF group's nuclear installations were included in the scope of the two "Euratom" directive proposals dated January 30, 2003. These directive proposals concerned, on the one hand, the definition of basic obligations and general principles related to the safety of nuclear installations, and on the other hand, the management of the nuclear fuel irradiated and radioactive waste (nuclear package). Although these directive proposals were not adopted, a consultation process was opened and in October 24, 2006 the European Commission adopted a recommendation on "financial resources for the decommissioning" which states the following: adequate resources must be available when required; such resources must cover all operations, including burnt fuel and radioactive waste; each Member State is required to create a national independent entity as an expert in the estimate of costs and funds management which will publish an annual report and a five-year estimate of the costs. The preferable option would be a separate decommissioning "fund", external or internal, that would assure strict accounting identification and traceability; the State (external management) or the operator (internal management) must guarantee the availability of necessary resources, which it must manage in a cautious (low-risk assets) and clear way.

## **6.5.1.2 FRENCH LEGISLATION**

European directive 96/92/EC, dated December 19, 1996, was transposed into French Law by the French Law of February 10, 2000 modified notably by the French Law of January 3, 2003, and the European directive of June 26, 2003 was transposed into French Law by the Law of August 9, 2004, which amended the French Law of February 10, 2000 and by the Law n° 2006-1537 of December 7, 2006 concerning to the energy sector.

In addition, the law defining energy policy guidelines (Loi de Programme fixant les Orientations de la Politique Energétique or "LPOPE"), dated July 13, 2005, defined energy policy priorities in France (supply security, a competitive price for energy, the effort against greenhouse emissions and social and regional cohesion), it also reinforced the position of EDF's generation facilities, in particular, the nuclear fleet, by explicitly providing for the construction of EPR reactor and by reaffirming the role of nuclear power, and finally, it also reorganized the measures designed to promote the development of wind power and confirmed the role of hydropower among new renewable energies.

Regarding management of energy requests (maîtrise de la demande d'énergie or "MDE"), LPOPE created an innovative system of energy saving certificates, also called "white certificates", that combines regulatory restrictions (obligation upon energy suppliers to save energy) and market mechanisms. The coming into force of this system was subject to publication of several implementation decrees which were published on May 23, 2006 and have determined that EDF's obligations concerning energy savings for the first

two fiscal years (July 1, 2006-June 30, 2007 and July 1, 2007-June 30, 2008) would amount to around 10 TWh of final energy per fiscal year. Finally, an order dated September 27, 2006, settled the amount of EDF's obligations for the period 2006-2009 to about 30 TWh.

EDF will have to prove having attained its obligations by returning the energy saving certificates which it will have obtained, either trough taking actions that allowed energy savings to third parties or on its own assets, or through other energy operators who were offering their certificates. The law creates an obligation to achieve a particular result upon "compelled" entities, such as EDF, which is sanctioned by a penalty amount to two cents for each KWh missing at the end of the obligations' period.

## PUBLIC SERVICE COMMITMENTS

Pursuant to Articles 1 and 2 of the French Law of February 10, 2000, EDF is responsible for certain public service commitments.

## PUBLIC SERVICE OBJECTIVES FOR ELECTRICITY

The law specifies that the purpose of the public service is, in particular, to guarantee electricity supplies across France, in the interest of the general public.

#### RESPONSIBILITY FOR BALANCED DEVELOPMENT OF THE SUPPLY

The aim of the balanced development of the supply is to achieve the objectives set in accordance with the multi-year generation investment program prepared by the Minister of Energy and to guarantee supplies to areas of France which are not interconnected with the network in metropolitan France.

The pluriannual generation investment program sets the objective of dividing the generation capacity by primary energy source and, where necessary, by generation technique and by geographic area, while ensuring opportunities for decentralized generation, cogeneration and new technologies. The generation investment program was established by an order of the Minister of Energy dated July 7, 2006.

As an electricity generator, EDF contributes, with the other generators, to the achievement of the investment objectives defined in this program.

## RESPONSIBILITY OF DEVELOPING AND OPERATING THE PUBLIC TRANSMISSION AND DISTRIBUTION NETWORKS

Developing and operating the public electricity transmission and distribution networks consists of ensuring reliable and efficient service in France and its overseas departments, with respect for the environment, and ensuring interconnection with neighboring countries, together with connection and access, under non-discriminatory conditions, to the public transmission and distribution networks.

Public network managers are responsible for this task.

## RESPONSIBILITY TO SUPPLY ELECTRICITY

Supplying electricity consists in providing across France and its overseas departments an electricity supply to customers benefiting from electricity sales regulated tariffs, supplying electricity in case of emergency and electricity of the last resort to eligible customers in the event that the balance responsible entity defaults in its supply obligations. In supplying electricity, EDF helps to supply electricity to those persons who are in a precarious situation.

Accordingly, Law n° 2006-872 of July 13, 2006, also called "Borloo" law, contains a provision that aims to prohibit electricity suppliers from carrying out, during the winter period (November 1st to March 15th), discontinuations in electricity supply resulting from a default of payment of the electricity bill in the main residence of individuals benefiting or having benefited from a decision in favor of the allowance of an aid from the solidarity fund for housing, within the last twelve months.

#### **SOCIAL HARMONY**

The Law of February 10, 2000 stipulates that, in the course of its business, EDF shall contribute to social harmony, mainly through tariff equalization for the sale of electricity to residential users who benefit from regulated sale tariffs, implementation of the rate "necessary product", holding of electricity supply pursuant to article L. 115-3 of the French Code de l'action sociale et des famille and through tariff equalization for the use of public distribution networks.

## PUBLIC SERVICE CONTRACTS

Article 1 of the Law of August 9, 2004 provides that the objectives and arrangements for discharging the public service commitments assigned to EDF shall be the subject of an agreement entered into with the French State (for a description of the new public service contract entered into by the French State and EDF, see section 6.4.3.4 ("Public service")).

## **GENERATION FACILITIES**

The French Law of February 10, 2000 opened up the electricity generation market to competition. Any person can operate an electricity generation facility, provided he has an operating license pursuant to Article 7 of the aforementioned French Law and the French Decree n° 2000-877 of September 7, 2000.

## **ELIGIBLE CUSTOMERS**

To allow the electricity market to be opened up to competition, Article 22-III of the French Law of February 10, 2000 provides that an eligible customer can enter into an electricity purchase agreement with a generator or supplier of his choice that operates within the European Union or in the territory of a State that is a party to an international agreement with France.

As of July 1, 2007, all customers are eligible.

In its November 30, 2006 decision in connection with the law concerning the energy sector, the French Constitutional court (Conseil Constitutionnel) censured some of the provisions related to regulated tariffs of article 17 of such law, considering that they are clearly contrary to the aims of opening the market to competition settled by the European "energy" directives.

In so doing, the Constitutional court contradicted the legislator's purpose and suppressed the possibility for a residential customer to return to the tariff on a given site after having exercised its eligibility and suppressed the possibility for a residential customer moving in an accommodation where the prior occupier had exercised his eligibility to benefit from the regulated tariffs. The Constitutional court had implicitly deprived from the benefit of the regulated tariffs the new consumption sites beyond December 31, 2007.

Law n° 2007-290 dated March 5, 2007 creating the opposable right to obtain a lodging (droit au logement opposable) added an article 66-2 to the Law of July 13, 2005 which specifies that article 66 of the latter is also applicable to new consumption sites connected to the public networks before July 1, 2010.

Law n° 2008-66 dated January 21, 2008 relating to regulated tariffs for electricity and natural gas authorizes residential customers using 36 kVA or less and who move in a site which previous owner had exercised its eligibility to benefit from regulated tariffs for the sale of electricity with respect to such site, provided a request is made prior to July 1, 2010.

It also provides that final residential customers having exercised their eligibility for a given site for at least 6 months may come back to regulated tariffs on this site, provided a request is made prior to July 1, 2010.

In order to compensate industrial customers from the increase of market prices, the Law of December 7, 2006 (article 30-1 of the Law of August 9, 2004), created nevertheless, a temporary tariff for customers having exercised their rights, also called "return tariff": this transitory regulated tariff for market adjustment ("tarif réglementé transitoire d'ajustement du marché" ("TaRTAM")) is applicable, for a period of no more than two years, to customers who will have made a written request to the supplier before July 1, 2007. Law n° 2008-776 of August 4, 2008 for the modernization of the economy extended this system for a further year, until June 30, 2010. Clients who currently benefit from the "TaRTAM" shall automatically continue to benefit from it until such date. Furthermore, the Law enables clients that had not already requested the application of the "TaRTAM" can do so until January 30, 2010.

According to the law, this TaRTAM cannot exceed by more than 25% the regulated tariff applicable to a site that shows the same characteristics. This limit was settled by an order of January 3, 2007 (see section 6.2.1.2.2.2 ("The prices of electricity sales applicable to eligible customers")).

The compensation of the charges borne by the suppliers as a result of this system is assured partially, and under certain conditions, by using the amounts collected under the CSPE, and partially by a "hydro-nuclear contribution" owed by electricity producers operating plants with a total installed capacity of more than 2,000 MW (principally EDF), established on the basis of their generation of electricity from nuclear and hydropower sources over the course of the previous year, with a limit of 3 euros per MWh (article 30-2 of the Law n° 2004-803 of August 9, 2004).

## THIRD-PARTY ACCESS TO THE NETWORKS

Article 23 of the French Law of February 10, 2000 states that network operators must guarantee access to the public transmission and distribution networks in order to:

- ensure the public service responsibility relating to the supply of electricity;
- ensure that the supply contracts with eligible customers are performed;
- allow a generator to supply its establishments, subsidiaries and parent company, within the limits of its own generation; and
- ensure that the electricity export agreements entered into by a generator or by a supplier to purchase electricity for resale in metropolitan France and the overseas departments are performed.

The tariffs for using the public transmission and distribution networks mentioned in Article 4 of the French Law of February 10, 2000 and currently in force were established by the ministerial decision of September 23, 2005. For more details on the tariffs for using the public transmission and distribution networks, please see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks (Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité, or "TURPE")") above.

Article 23 of the French Law of February 10, 2000 also provides that access to the networks is ensured through agreements to be entered into between the public transmission and distribution network operators and the users of these networks. Moreover, if it so wishes, any company selling electricity to eligible customers may enter into an agreement with the public distribution network operators relating to access to the networks for the performance of supply agreements entered into by such company with eligible end-users.

Finally, the same article stipulates that any refusal to enter into an agreement for access to the public networks must be justified and notified to the applicant and the Energy Regulation Commission (Commission de Régulation de l'Energie or "CRE"). Refusals must be in accordance with public, objective and non-discriminatory criteria and can be founded only on the imperatives related to the accomplishment of public service responsibilities and on technical reasons affecting the safety and security of the networks, together with the quality of their operation.

## **ELECTRICITY PURCHASE OBLIGATIONS**

EDF is subject to electricity purchase obligations pursuant to the French Law of February 10, 2000.

Article 8 of this law provides that the French Minister in charge of the Energy sector may, under certain conditions, allow the creation of an electricity generation plant following a call for tenders procedure. EDF as a "Producer" can apply to such a procedure. EDF as a "Buyer" is then bound to enter into an agreement with the selected applicants or into a special kind of agreement (protocol) if EDF "Producer" is a selected applicant.

Article 10 of the French Law of February 10, 2000 provides that EDF and the NND are bound to enter into an agreement upon producers' request if such agreements concerns the purchase of electricity generated by:

- plants which value municipal solid waste or which aim to supply a heat
- plants which generating capacity does not exceed 12 MW and which use renewable energies or highly capable techniques in terms of energy efficiency, such as cogeneration;
- plants which use wind power and which are based in a wind power development area:
- plants which value recovery energies.

Nevertheless, the abovementioned plants can only benefit once from the purchase obligation agreements and the possible excess costs resulting from such agreements, which are borne by EDF and the NND, are compensated by the electricity public service contribution (Contribution pour le Service Public d'Electricité or "CSPE").

Finally, the French Decree n° 2001-410 of May 10, 2001 provided that a generator benefiting from a purchase obligation should sell all of its generation to EDF and the non-binding model of purchase agreements binding EDF and the generators should be approved by the Minister of Energy. Purchasing terms and conditions and, specifically, the electricity purchase prices, are set by order of the Minister of Energy, after consultation with the High Council for Energy ("Conseil Supérieur de l'Energie") and the CRE.

## MECHANISM FOR COMPENSATING EXCESS COSTS OF PUBLIC **SFRVICE**

## THE CSPE

The contribution to the electricity public service contribution is intended to compensate for charges attributable to the public service responsibilities assigned to EDF and to the NND.

The public service charges compensated by the CSPE are as follows: Insofar as electricity generation is involved:

- excess costs resulting, on the one hand, from electricity purchase agreements following call for tender procedures (article 8 of the Law of 2000) and, on the other hand, from purchase obligation agreements entered into pursuant to article 10 of the Law of 2000, including cases where facilities operated by EDF or a NND are involved;
- excess generation costs in non-interconnected zones, which are not covered by the portion of the regulated tariff for customers relating to generation.

Insofar as electricity supply is involved, electricity suppliers are compensa-

- loss of income and excess costs incurred while implementing the special pricing for an "essential commodity" set forth in Article 4 of the French Law of February 10, 2000; and
- costs incurred as a result of their participation in the plan established for lowest-income people.

Expenses borne by suppliers in accordance with TaRTAM supply are partially financed by a fraction of the CSPE, pursuant to article 30-2 of the Law of August 9, 2004, but that contribution cannot exceed €0.55 per MWh.

The CSPE is collected in full directly from the final customer either:

- as an additional levy on electricity tariffs (for non-eligible customers and eligible customers that have not exercised their right of eligibility) or on network usage tariffs (for eligible customers that have exercised their right
- directly from electricity generators that generate for their own use, or other end-users who do not use the public electricity transmission or distribution networks.

The amount of the contribution, by consumer site, due by eligible customers may not exceed €500,000. In addition, the LPOPE provided that as of January 1, 2006 the total amount due for CSPE by any industrial company consuming more than 7 GWh electricity a year is limited to a maximum of 0.5% of its added value.

## COMPENSATION FOR EXCESS DISTRIBUTION COSTS

Tariff equalization is intended to spread the charges incurred as a result of public service commitments assigned for managing the electricity distribution networks between the operators involved (EDF group and the NND).

## REGULATION OF THE ELECTRICITY SECTOR

## THE ENERGY REGULATION COMMISSION

The Energy Regulation Commission (Commission de Régulation de l'Energie, or "CRE") is an independent administrative authority created by Article 28 of the French Law of February 10, 2000. The amounts required for the CRE to carry out of its missions are registered in the French State general budget.

The law concerning to the energy sector gives a general definition of CRE's mission: "In accordance with the powers given to it, the Energy Regulation Commission contributes, to the benefit of the final consumers, to the right functioning of electricity and natural gas markets. In particular, it assures that the access conditions to electricity and natural gas transmission and distribution networks do not inhibit the development of competition. Also, concerning electricity and natural gas, it supervises the transactions carried out between suppliers, merchants and producers, transactions carried out on organized markets, as well as over-the-border exchange transactions. It assures the consistency of suppliers, merchants and producers' offers with their technical and economical restrictions.'

The CRE does not only have an advisory power (proposal power and the power to render an opinion), but also a decision power (approval power and regulatory power).

The CRE proposes to the Ministers in charge of the Economy and Industry usage tariffs for public transmission and distribution networks, the charges attributable to public service commitments assigned to electricity generators and the net amount of the related contributions, as well as the charges set forth in Article 48 of the French Law 2000 and the related net contributions.

It also has important information and investigation powers, as well as the authority to settle disputes and to apply penalties, which the law of December 7, 2006 granted to an ad hoc committee within the commission: the dispute settlement and penalty committee, which is composed of members of the Conseil d'Etat and of the Cour de cassation.

## **6.5.2** Legislation relating to the gas market

## **6.5.2.1 COMMUNITY LEGISLATION**

On June 22, 1998, the European Parliament and the European Council passed European directive 98/30/EC, intended to establish a European gas market in the Member States. This directive was repealed by European directive 2003/55/EC of June 26, 2003 relating to common rules for the European natural gas market.

## EUROPEAN DIRECTIVE 2003/55/EC OF JUNE 26, 2003

With the objectives of (i) improving the operation of the gas market by taking concrete measures, and (ii) accelerating the opening to competition of national gas markets, this directive establishes the documentary foundation for the creation of a fully operational European natural gas market in which there is fair competition.

Like its predecessor, this directive sets forth common rules concerning transmission, distribution, supply and storage of natural gas, including LNG, biogas, gas output from biomass, and other types of gas.

This directive establishes the general terms relating to the organization and operation of the natural gas sector, non-discriminatory access to the market, and the criteria and procedures applicable to the granting of licenses for the transmission, distribution, supply and storage of natural gas and for operating the networks.

It accelerated the opening of the natural gas markets to competition by extending this opening to all customers other than residential customers (i.e., for customers purchasing gas for purposes other than for their domestic use) from July 1, 2004, and specified that this opening will be extended to all customers from July 1, 2007.

## 6.5.2.2 FRENCH LEGISLATION

The first European directive of 1998 was transposed into French Law by Law n° 2003-8 of January 3, 2003, relating to the gas and electricity markets and to the public service for energy, as amended and supplemented by French Law n° 2004-803 of August 9, 2004, by the LPOPE and Law n° 2006-1537 dated December 7, 2006 relating to the energy sector.

European directive 2003/55/EC was transposed into French Law mainly by the Law of August 9, 2004 and the Law of December 7, 2006.

Finally, the Law of December 2006 concerning the energy sector organizes notably the opening up to competition of the French market for natural gas for residential customers.

## LAW N° 2003-8 OF JANUARY 3, 2003

## ACCESS TO NATURAL GAS SYSTEMS

This law provides that eligible customers, suppliers and their agents have a right of access to natural gas transportation and distribution facilities, and to LNG facilities, under the terms and conditions set forth in an agreement with the operators.

Natural gas network operators must refrain from any discrimination between users or categories of users.

#### **ELIGIBLE CUSTOMERS**

The French Law of January 3, 2003 provides, in particular, that eligible customers have the option to be supplied with natural gas by the supplier

Since July 1, 2007, in accordance with the European directive 2003/55/EC and following the implementation of the law concerning the energy sector, all customers have been able to freely chose their supplier.

Based on the provisions of French Law dated July 13, 2005, as amended by French Law n° 2008-66 dated January 21, 2008, a non-residential customer cannot benefit from regulated tariffs for the sale of gas for a site unless it or its predecessor at the site exercised eligibility for that site.

In addition, a non-residential customer cannot claim the benefit of regulated tariffs for a new site.

The situation is different for residential customers who, since publication of French Law dated January 21, 2008, can, provided they make the request before July 1, 2010, enjoy regulated tariffs for a site, subject to the sole condition they have not themselves exercised their eligibility rights for that site, and they can also benefit from regulated tariffs for a new site connected to the network before July 1, 2010.

Domestic clients eligible for the special "vital commodities" tariff for electricity benefit, at their request, for part of their consumption, from a special solidarity tariff applicable to the supply of natural gas and related services. The proceedings of enforcement of this provision are fixed by decree n° 2008-778 of August 13, 2008 related to the supply of natural gas at the special solidarity tariff. The additional costs resulting from supply at this tariff are offset by a contribution by the suppliers of natural gas and based on the quantities of natural gas sold by these suppliers to the final consumers.

## SUPPLIERS

French Law defines suppliers as persons who (i) are based in the territory of a Member State of the European Union or in the territory of another State pursuant to international agreements, and (ii) possess a license issued by the Minister of Energy.

EDF is licensed, pursuant to an order of the Deputy Minister of Industry, dated September 14, 2004, to operate as a natural gas supplier to nonresidential customers that do not provide a service of general interest, and pursuant to an order dated August 9, 2005, to non-domestic customers that do provide a service of general interest as well as to gas distributors and suppliers and, following an order of June 15, 2007, residential customers.

## TRANSMISSION AND DISTRIBUTION OF NATURAL GAS

The French Law of January 3, 2003 provides, in particular, that carriers and distributors must ensure the safety and efficiency of their network and the balance of natural gas flows, taking into account technical constraints

## **DETERMINATION OF TARIFFS**

The tariffs for using the transmission and distribution networks and LNG facilities and regulated tariffs for the sale of natural gas are determined, according to public, objective, and non-discriminatory criteria and taking into account the type of service and the associated costs, jointly by the Minister of Economy and the Minister of Energy upon the recommendation of the CRE.

#### UNDERGROUND STORAGE AND THIRD-PARTY ACCESS TO NATURAL GAS STOCKS

The French Law of January 3, 2003 requires all suppliers to hold, on October 31 of each year, directly or indirectly through an agent, sufficient inventories of natural gas in France to comply, for the period between November 1 and March 31, with its direct or indirect contractual obligations to supply its residential customers and other customers that are charged with public service obligations or that have not contractually accepted interruptible gas supply.

The Decree n° 2006-1034 of August 21, 2006 specifies the laws and regulations applicable to underground storage of natural gas.

#### **A**UDIT AND PENALTIES

The Law of January 3, 2003 grants authority to the Minister of Energy and the Minister of Economy to inquire into matters concerning the regulation of the gas market. The Minister of Energy may also levy a fine, or withdraw, or suspend for a term which may not exceed one year, a license to supply natural gas.

## 6.5.3 Public electricity distribution concessions

#### **CONCESSION SYSTEM**

The concessions system, established by article 6 of the Law of June 15, 1906, was upheld by the French Law of April 8, 1946, which transferred to EDF existing concessions and upheld the rights of the NND (non nationalized distributors), then confirmed by the Law of February 10, 2000. Pursuant to the above, the licensors organize the public electricity distribution service through concession agreements and specifications which set forth the rights and obligations of the authority, in its capacity as licensor, and the licensee, respectively. The licensors are most often associations of municipalities or departments, whose administration is set forth by Articles L. 5212-1 to L. 5212-34 of the General Code for Local Authorities (Code Général des Collectivités Territoriales, or "CGCT").

The separation of supply and network operations, imposed by directive n° 2003/54/CE led to the identification by the Law of December 7, 2006 of a public supply service at regulated tariffs entrusted to EDF and the NND in their service zones, the public service for the development and operation of the public electricity distribution networks being entrusted to EDF and the NND in their service zones, and to EDF for those zones not interconnected to the metropolitan continental network. Article 14 of the Law of August 9, 2004 provides that the amendments and restatements of the concession agreements will have to be executed by the three parties: the public entity granting the concession, the distribution network managers for the part relative to management of the public distribution network and EDF (or the territorially competent NDD) with respect to supply at regulated tariffs. The ongoing agreements are deemed to have been signed jointly by these three entities.

## RIGHTS OF AUTHORITIES GRANTING A CONCESSION

Authorities granting a concession have the following rights:

- the possibility of personally managing the expansion of distribution networks;
- ownership of the facilities covered by the concession (property to be returned); with the exception of source stations transforming high or very high voltage current to medium voltage belonging to ERDF (see Article 36 II of the Law of August 9, 2004);

- right to collect rents (see section 6.2.2.2.3 ("Concessions") above);
- electricity generation, limited to facilities that are in close proximity enabling either energy saving and a reduction in atmospheric pollution (article L. 2224-32 of the CGCT or extension or network upgrade savings, and the power of which does not exceed 1 MW (or 2 MW in Guadeloupe, French Guyana, Martinique and La Réunion) as set forth in the French Decree n° 2004-46 of January 6, 2004;
- demand-side management for consumers supplied with low voltage with a view to saving energy when extending or upgrading the public distribution network; and
- audit of the licensee's business, carried out by an auditor appointed by the licensor which is distinct from the public distribution network operator.

For more details concerning the content of the concession agreement and the specifications, see section 6.2.2.2.3 ("Concessions") above.

## 6.5.4 Regulations relating to the environment, nuclear facilities, health, hygiene and safety

EDF's business in France, as well as in other countries where EDF operates, is subject to regulations related to the environment, nuclear power, health, hygiene and safety. Compliance with these regulations, which are increasingly restrictive and subject to constant change, exposes the Group to significant costs.

## 6.5.4.1 REGULATIONS APPLICABLE TO CLASSIFIED FACILITIES FOR THE PROTECTION OF THE ENVIRONMENT

## LICENSES

The EDF group's business in most countries where it operates, is subject to obtaining permits or licenses, or to the completion of formalities prior to beginning operations. These obligations notably stem from regulations related to the environment, urban planning, health, hygiene and safety.

Some facilities operated in France by EDF, mainly fossil-fired power plants, are subject to the legislation relating to Classified Facilities for the Protection of the Environment (Installations Classées pour la Protection de l'Environnement, or "ICPE"). Pursuant to the rules contained in the French Environment Code (Code de l'environnement), facilities which may present dangers or disadvantages, mainly to public health and safety, are subject, according to the magnitude of the dangers or disadvantages presented by their use, either to a prior declaration or to an authorization. In the latter case, the authorization to operate will take the form of an order of the préfet issued after consultation with various bodies and a public inquiry, containing specific operating instructions.

The ICPE regulations also require, when a facility is taken out of service, the restoration of the site, depending on the expected use of the land.

ICPEs are placed under the control of the préfet and the regional departments for industry, research and the environment (Directions Régionales de l'Industrie, de la Recherche et de l'Environnement, or "DRIRE"), which are responsible for organizing inspections of classified facilities. If the operator of an ICPE fails to comply with the instructions imposed on its operations, and regardless of any potential criminal proceedings, the préfet may impose administrative penalties, such as the deposit of a sum equal to the cost of the work to be done to make the facilities compliant, forced execution of the measures prescribed by order, suspension of operations, or a proposal for the shutdown or removal of the facility by decree rendered upon review by the French Conseil d'Etat.

#### **HEALTH AND SAFETY PROVISIONS**

The safety provisions in the ICPE regulations require, prior to the authorization of a facility, the completion of a study setting forth the dangers, including an analysis of the risk of accidents, as well as the appropriate measures to reduce the probability and impacts of these accidents. The project for creating an ICPE, which is subject to authorization, must also be the subject of a public inquiry regarding any effects it might have on public health, safety and salubrity and on the protection of the environment. In addition to technical instructions for the protection of health and safety, the authorization order may also impose on the operator of a classified facility the preparation of an Internal Operation Plan (Plan d'Opération Interne, or "POI") setting out organizational measures, action measures and the necessary resources to protect employees, the population and the environment in the event of an accident.

## 6.5.4.2 SPECIAL REGULATIONS APPLICABLE TO NUCLEAR **FACILITIES**

From now on, EDF is subject in France to Law n° 2006-686 of June 13, 2006 concerning transparency and security in the nuclear field ("TSN law"), which determines the main provisions applicable to Basic Nuclear Facilities (Installations Nucléaires de Base, or "INB"). The Law created the Nuclear Security Authority (Autorité de Sûreté Nucléaire or "ASN"), an independent administrative authority, which takes up a large part of the functions previously assigned to the Direction Générale de la Sûreté Nucléaire et de la Radioprotection (DGSNR), the ministries retaining authority over the issuance of key permits and the drafting of the general regulation. Pursuant to this law, the decree n° 1228 of December 11, 1963 relating to nuclear fields has been repealed and replaced by a new Decree n° 2007-1557 of November 2, 2007 relating to basic nuclear fields facilities and to the control, regarding nuclear security, of the transportation of radioactive substances.

The TSN law provides, in particular, that the establishment of an INB is authorized, following a public inquiry, by a decree of the Prime Minister issued following a report by the ministers in charge of Nuclear Security (which means the Minister of Economy and the Minister of Environment) after advice of the ASN. This new decree defines the scope of the facilities, mentions the nature and the capacity of the installation, sets the time by which those facilities should start to be operated and the frequency of security reviews if it is not equal to 10 years and, finally, imposes essential elements which ensure the protection, in particular, of health and public safety, of nature and of the environment. This commissioning authorization is granted by the ASN. Safety check enables to evaluate the compliance of the facilities to the applicable regulations and to update the risk assessment that the facility poses to the interests mentioned above. The operating life of an INB is usually not defined by regulation although there is no objection to it.

In addition, water pumping conditions, liquid and gaseous waste discharges, whether radioactive or not, which are likely to cause atmospheric pollution or specific odors, was well as the associated limits will be set in accordance to the authorization decree, following decisions of the ASN, subject to the approval by the Ministers in charge of the Nuclear Safety with respect to the decisions fixing the limits.

The ASN will also give other instructions in accordance with the creation authorization decree, in particular, to prevent or limit the effects of any incidents, to define individual and collective means of protection of the populations, to limit noise annoyances and manage the waste generated or stored by the facilities.

#### RULES FOR THE SAFETY AND CONTROL OF NUCLEAR FACILITIES

EDF's nuclear facilities are subject, as soon as they are established, to nuclear safety regulations. Accordingly, the application for an authorization namely includes a preliminary report of the safety which consists of, for what concerns the INB, a study of the impact on the environment, a study of the dangers that sets forth the measures taken to reduce the risks inherent to operating an INB and to limit the consequences of any accident and an study of the facility on environment and on health, a decommissioning plan and a risk management study. INBs must also comply with the general rules of the ministerial order for the protection from risks in the safety, health, sanitary and nature and environment protection fields. An Internal Emergency Plan (Plan d'Urgence Interne, or "PUI") specifying the organization and resources to be implemented in the event of an accident must be drafted by the operator. In addition, the latter must also prepare an annual report, submitted to the CHSCT and published, namely describing the measures taken in terms of nuclear safety and radiation protection. Moreover, any accident or incident, nuclear or not, which has or may have significant consequences for the safety of an INB must be declared immediately, in particular, to the ASN, which will ensure the adoption of appropriate measures to remediate the accident or incident and to avoid such an accident or incident being repeated.

The ASN can make technical regulatory decisions to complete the implementation methods of the decrees and orders passed in the nuclear safety and radiation protection fields. Such decisions are subject to the relevant ministers' approval.

The TSN law also includes provisions concerning public information and transparency, such as the creation of a high committee for transparency and information on nuclear safety or the possibility made possible to any person to ask directly to the operator for information on the risks to the safety of its installation.

Finally, increasingly stricter administrative and criminal penalties have been created to sanction INB operators who do not comply with their legal and regulatory obligations, such as three years of imprisonment and a €150,000 fine if the INB is operated without an authorization, or one year of imprisonment and a €30,000 fine if radioactive substances are transported without authorization.

## **DECOMMISSIONING NUCLEAR FACILITIES**

The final shutdown and decommissioning of an INB are authorized by decree after the ASN has given its opinion. The latter gives instructions concerning the decommissioning and the decree will notably determine the decommissioning's characteristics and delay. Once the decommissioning is completed, the ASN will render a decommissioning decision for the relevant facility after approval by the Ministers in charge of Nuclear Safety.

## **RADIOACTIVE WASTE**

The EDF group's business is subject to French regulations for the handling, storage and long-term management of nuclear waste. EDF is legally responsible for the nuclear waste resulting from its business. In France, radioactive waste is managed by the National Agency for Radioactive Waste Management (Agence Nationale pour la Gestion des Déchets Radioactifs, or "ANDRA"), an EPIC created by the French Law of December 30, 1991. The method for the storage of nuclear waste in France depends on its degree of radioactivity and its nuclear activity period. In addition to certain temporary storage on EDF sites, very low-level waste produced by EDF (from, for example, concrete or metal waste left over after decommissioning a nuclear power plant) is stored on an ANDRA site, known as "TFA",

opened in 2003. Short life, low-or medium-level waste that is produced by EDF's business is stored above ground at the ANDRA's Aube storage center (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")). Long life, high-level waste produced from the treatment of burnt fuel is vitrified and stored temporarily at the Areva NC (formerly Cogema) center at The Hague pending the adoption of a long-term management solution (see section 6.2.1.1.3.4 (("The nuclear fuel cycle and related issues") below).

Long life, medium-level waste (for example, from shells, ends and clad pieces) is either cemented or compacted and confined in stainless steel containers. They are currently in intermediate, temporary storage pending a final decision concerning long-time management (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")).

The National Commission for the evaluation of research concerning the management of radioactive waste has presented its final evaluation report on January 18, 2006. The report opts for "reversible deep geological underground storage" as an option that should be retained for ultimate waste, even if the conditions for a possible final decision on storage were not yet fulfilled. Following the passing of program law no. 2006-739 of June 28, 2006 concerning the long-term management of radioactive materials and waste, research and studies concerning HAVL and MAVL waste are carried out in accordance with the three complementary axis hereunder:

- separation and transformation of long-life radioactive elements, in order to obtain, by 2012, an evaluation of industrial prospects in such fields and to commission a new prototype facility before December 31, 2020;
- reversible storage in deep geological layers: choice and conception of a storage center, for which an authorization request should be filed in 2015 and which should be commissioned in 2025, subject to such authorization;
- storage: in order to create new storage facilities or change the existing facilities at latest by 2015.

The question of what option should be retained in France regarding the management of a long-life high-level waste was the subject of a public debate organized by the "Commission Nationale du Débat Public" ("CNDP"). The report of this debate, as well as the conclusions of its President, were made available on January 27, 2006. The CNDP's most remarkable contribution is the appearance of a new possible strategy which includes both the carrying out of test on the geological storage and the creation of a longterm storage prototype.

In addition to the three axis mentioned above, the program Law of June 28, 2006 provides for a national radioactive materials and waste management plan, updated every three years, which will consist of a report of the existing management methods and determine expected storage and stockage needs; the law sets forth that a deep geological layer storage center is a basis nuclear facility for which the creation authorization by a decree of "Conseil d'Etat" will be preceded by a public debate. This law also sets forth for the organization and the financing of radioactive waste management.

Finally, it also provides for the framework of the evaluation and hedging of basis nuclear facilities decommissioning costs and for the management of burnt fuels and radioactive waste. In particular, assets dedicated to the hedging of provisions cannot be used for any other purpose by the operator, and should be subject to a different accounting. The implementation of such provisions will be controlled by the administrative authority, which consists of the ministers in charge of the economy and energy, themselves under the control of a National Commission for the evaluation of financing of INB's decommissioning costs and for the management of burnt fuels and radioactive waste.

Transportation of radioactive waste is subject in France to Articles L. 1333-1 et seq. of the French Defense Code (Code de la défense), governing the protection and control of nuclear materials, and the regulations for the international and national transportation of hazardous goods, under the control of the ASN. The latter carries out a critical analysis of the security files submitted by applicants to obtain approval for their prototype package. The objective of these regulations is to prevent the loss or disappearance of packages containing nuclear materials, mainly while in transit, and to ensure human and environmental safety, while controlling the risks of contamination by packages containing nuclear materials.

Decree n° 2007-243 of February 23, 2007 concerning the securing of nuclear costs financing sets forth the implementation conditions and methods of the program Law of June 2006, applicable as of June 29, 2007.

Accordingly, the operator can evaluate costs according to five categories (nuclear facilities decommissioning costs, burnt fuels management costs, etc.) which are themselves divided into several kinds of operations following a list provided by an administrative authority's order. The costs are evaluated according to a method based on an analysis of the different contemplated options for the implementation of the operation and on that basis, prudently choose a standard strategy.

The discount rate, used for the calculation of provisions, is determined by the operator and can exceed neither the profitability rate expected from hedging assets managed according to a sufficient safety and liquidity degree nor a ceiling determined by an administrative authority's order.

Different kinds of hedging assets are accepted within a certain percentage, such as bonds, claims or securities issued or guaranteed by a member state of the European Community or of the OECD, or shares and other securities giving access to the share capital of companies whose headquarters are based on a member state of the European Community or the OECD.

Property assets, claims' acts or titles, deposit accounts must be kept or opened in France. The operator must keep a currently updated register of hedging assets and have summary report be transferred every three-months to the administrative authority. The operator's board of directors determines the framework of the hedging assets creation and management policy, in accordance with the assets' purpose and general principles of prudence and risk sharing.

In addition, a committee should be created by the Board of Directors which will be in charge of examining and giving its opinion on the framework of the hedging assets creation and management policy, as well as a permanent procedure for the internal control of costs financing and in particular, their evaluation and of the management of hedging assets. In companies which have issued listed securities such procedures may be the subject of a special chapter of the Chairman of the Board's annual report concerning internal controls.

Finally, a report is filed with the administrative authority and the ASN every three years, a copy of which is sent to the statutory Auditor, which includes a description of namely the costs evaluation, the methods used for the calculation of provisions and the composition of the assets. The administrative authority can require any additional explanation, have an external entity prepare a study or require that an expertise of the assets value be carried out, at operator's expenses.

## RADIATION PROTECTION REGULATIONS

In France, the French Public Health Code (Code de la santé publique) states that all nuclear activities where there is a risk of exposure of persons to ionizing radiation fall under the authority of the ASN. General protection of the population against radiation is based mainly on the subordination of any nuclear activity to a declaration or an authorization. Authorizations issued for the establishment of an INB as described above encompasses such authorization. The French Decree n° 2002-460 of April 4, 2002 relating to the protection of persons against the dangers of ionizing radiation, which transposes the provisions of European directive 92/29/EURATOM of May 13, 1996 and European directive 97/43/EURATOM of June 30, 1997, sets the maximum exposure by the general public at 1 mSv per year.

French regulations relating to the protection of workers against the dangers of ionizing radiation, based on European directive 96/29/EURATOM and on French Decree n° 2003-296 of March 31, 2003, specifically impose a limit on exposure of workers to ionizing radiation of 20 mSv for 12 consecutive months.

To ensure the transposition of the Directive 2003/122/EURATOM of December 22, 2003 on the control of high-activity sealed radioactive sources and orphan sources, and to introduce changes resulting from the Law regarding transparency and safety in the nuclear field dated June 13, 2006, the regulatory part of the Public Health Code was amended by the Decree n° 2007-1582 of November 7, 2007 relating to the protection of individuals against the dangers of ionizing radiation.

## CIVIL LIABILITY OF NUCLEAR FACILITY OPERATORS

A number of international agreements govern the civil liability of nuclear facility operators, in particular the Paris Convention of July 29, 1960 on Third-Party Liability in the Field of Nuclear Energy and the Brussels Convention of January 31, 1963, supplementary to the Paris Convention. These two conventions are applicable to the signatory countries that have ratified them, including France, the United Kingdom and Germany, countries in which the Group operates nuclear facilities (in France, through EDF, in the United Kingdom, through British Energy, and in Germany, through EnBW). In France, pursuant to these conventions, nuclear civil liability is governed by the French law n° 68-943 of October 30, 1968, as amended.

The Paris Convention institutes a specific liability scheme, which has the following characteristics:

- Damage covered: repair of any damage to persons and property;
- Type of liability: "responsabilité objective", i.e., strict liability;
- Exemptions: the operator is not liable for damage caused by a nuclear accident if such accident is due directly to acts of armed conflict, hostilities, civil war, insurrection or a natural catastrophe of an exceptional nature; however, acts of terrorism are not an exemption;
- Responsible person: the principle of channeling liability to one person or entity: the operator of the nuclear facility where the nuclear substances that caused the damage are held or where they originated;
- Limits of liability: the operator's liability may be limited both in its amount and its term by national legislation, provided this complies with the common minimum liability amount as set by the Conventions:
  - if the facility is in France, the operator's liability is limited to approximately €91.5 million per nuclear accident in a facility and to approximately €22.9 million per nuclear accident during transportation. The time granted to make a claim for compensation is 10 years from the date of the accident:
- over and above the maximum amount for which the operator is liable, the State in which the accident occurred will be liable for the compensation of victims up to a maximum of €228.6 million; and
- over and above this amount, member States that are signatories of the Brussels Convention (which includes France) contribute collectively to compensation up to a ceiling of €381.1 million; and
- Financial guarantee: there is an obligation of insurance or financial guarantee by the operator up to the fixed liability amounts, in order to guarantee the availability of funds. This insurance or financial guarantee must be approved by the State in which the insured or guaranteed facility is

located. EDF has opted for insurance and has complied with the applicable requirements for coverage (see section 4.1.3 ("Insurance")).

Protocols amending the Paris Convention and the Brussels Convention were signed on February 12, 2004. They require the availability of compensation amounts which are much greater, in order to cover a greater number of victims and types of collateral damage. The operator's liability is accordingly at least €700 million per nuclear accident in a facility and €80 million per nuclear accident during transportation. The State where the nuclear facility responsible for the damage is located will be liable for amounts above the €700 million for which the operator is liable, up to a maximum amount of €1,200 million. Above this amount, the States that are a party to the Brussels Convention will be liable up to a maximum amount of €1,500 million.

In addition, for physical injury only, the time granted to claim compensation will change from 10 years to 30 years from the date of the accident.

Another important change is the introduction of a detailed definition of the concept of "nuclear damage", which includes non-economic loss, the cost of preventive measures, the cost of restoring a damaged environment and certain other losses resulting from damage to the environment.

Finally, the protocols provide that exemptions of an operator's liability will be limited to cases of armed conflict, hostilities, civil war or insurrection (natural disasters no longer entitle the operator to an exemption).

These new provisions were transposed into French Law by the above mentioned TSN Law of June 13, 2006. These provisions will only be applicable, however, when the protocols mentioned above come into force which requires two-thirds of the signatory states to ratify them. France has adopted a Law enabling the ratification of both protocols (Law n° 2006-786 of July 5, 2006) but has not yet filed the relevant ratification instruments as initialized by the minister of foreign affairs.

## 6.5.4.3 REGULATIONS APPLICABLE TO OTHER GENERATION METHODS USED BY THE EDF GROUP

## SPECIFIC REGULATIONS FOR FOSSIL-FIRED GENERATION

The EDF group's fossil-fired generation business is subject in France to the regulations relating to ICPEs. EDF's fleet of fossil-fired facilities must also comply with specific regulations relating to the quality of the air, adopted mainly as a result of the European directive 2001/81/EC of October 23, 2001 on national emissions ceilings for certain atmospheric pollutants (NEC directive), and European directive 2001/80/EC of October 23, 2001 relating to the limitation of emissions of certain pollutants into the air from large combustion plants (LCP directive) (see section 6.5.4.5 ("Principal draft regulations likely to have an effect on the EDF group's activities") for a description of these specific regulations).

Exemptions are possible for facilities working at most 20,000 hours between 2008 and 2015 and a pollutants issuance reduction plan (SNR) has also been provided for which could allow a sharing of the disposals following the gathering of several facilities and therefore lead to an increased flexibility. European directive 2003/105/CE of December 16, 2003 (so called Seveso 3), was transposed into French Law by decree n° 2005-989 of August 10, 2005 (higher thresholds) and by the order of September 29, 2005 (lower thresholds). It amends the European Council directive 96/82/CE concerning the management of risks related to major incidents with dangerous substances (so called "Seveso 2" directive) and could have a significant impact on EDF

group's activities. In particular, this directive reduces the level of authorized quantities of carcinogenic or environmentally dangerous substances, for facilities generating, using or storing such substances. Accordingly, some of EDF's fossil-fired power plants could be subject to Seveso stricter regulations and therefore be imposed upon reinforced obligations in terms of safety and constitution of financial guaranties.

## SPECIFIC REGULATIONS FOR HYDROPOWER FACILITIES

Hydropower facilities are subject in France to the rules established by the French Law of October 16, 1919, as amended. They require concessions granted by the Prime Minister (for facilities generating more than 100 MW) or by the préfet (for facilities generating between 4.5 MW and 100 MW), or authorizations attributed by the préfet (for facilities under 4.5 MW), (see section 6.2.1.1.4.4 ("Current and future hydropower generation issues") concerning hydropower concessions).

EDF's hydropower generation business is subject to water regulations. Such regulations relate to variations in water levels and flow rates, and to the safety of areas in the vicinity and downstream of the hydropower facility (see section 6.5.4.4 ("Other regulations relating to the environment, health, hygiene and safety") below).

## CONDITIONS FOR THE RENEWAL OF HYDROPOWER CONCESSIONS

Pursuant to the French Law of October 16, 1919, French Decree n° 94-894 of October 13, 1994, as amended by the French Decree n° 2008-1009 of September 26, 2008, specifies the conditions for the award or renewal of a concession. This decree includes the implementation terms of French Law n° 93/122 of January 29, 1993 (known as the loi Sapin), which provide for a competitive tender procedure in the context of public service delegations.

The former preference right for the incumbent concessionary has been suppressed by the amended Finance Act for 2006 because it did not comply with the competition procedures. The amended Finance Act for 2006 also provides for, as for what concerns hydropower concessions, the creation, at the time of their renewal, of a new annual royalty of at most 25% of the profits resulting from the sale of electricity generated by the conceded hydroelectric sites. This royalty is paid to the French State and partly allocated to departments.

Decree 2008-1009 dated September 26, 2008 sets the rules and procedures for a hydropower concession request in a competitive market. It determines 3 criteria for the choice of the future concessionary: guarantee of the energy efficiency of the operation of the waterfall; respect of a balanced management of water resources; best economic and financial conditions for the licensor or conceding authority. The new procedure for the designation of a concessionary will now have a duration of 5 years (compared with 11 years currently).

## SPECIFIC REGULATIONS FOR WIND ENERGY GENERATION

In France, the construction of wind farms is subject, pursuant to Articles. R. 421-2 of the Urban Planning Code, to obtaining a construction permit for wind farms with a height equal to or greater than 12 metres. Setting up one or more wind turbines requires a preliminary public inquiry and an impact study if the height of the mast exceeds 50 metres. An impact notice is nonetheless required by Article L. 553-2 of the Environmental Code if the height is less.

## 6.5.4.4 OTHER REGULATIONS RELATING TO THE ENVIRONMENT, **HEALTH, HYGIENE AND SAFETY**

#### **ENVIRONMENTAL REGULATIONS**

#### THE LAW CONCERNING WATER AND THE AQUATIC ENVIRONMENT

The law concerning water and the aquatic environment of December 30, 2006, which mainly aims at recovering the ecological quality of water streams and improving water management, includes several provisions which may concern EDF, but also allows to include in water management policy issues related to electric supply security and hydroelectric generation priorities.

Accordingly, certain restrictions will be increased, namely due to the increase of the minimum rate of flow on the downstream of dams, to the possibility of amending or canceling the operation permit if significant disturbances are caused to certain migrating fish by the operation of the site, or to changes in waterstream ranks to inhibit the construction of new sites or set forth instructions for the renewal of operation permits. Nevertheless, the minimum rate flow system will be less stricter in some cases, namely for sites of state-of-the-art generation, and a certain flexibility in administrative proceedings has been organized in order to facilitate the set up of supplemental hydroelectric equipments.

The legislation also upgraded the legal status of various water management documents: the Schémas d'Aménagement et de Gestion de l'Eau (Water Development and Management Plans) have thus become actual regulations which can be enforced against all parties and may contain standards regarding the quality or quantity of water.

Regulation n° 1100/2007 of the Council dated September 18, 2007 instituting measures for reconstituting European eel stocks has been in force since September 25, 2007 and is directly applicable without any transposition. It imposes a duty on each Member State to rapidly prepare (submission to the Commission by December 31, 2008) plans for managing the eel population in each catchment area concerned. The purpose of the management plans is to reduce mortality levels caused by human activities and ensure that at least 40% of the eel biomass reaches the sea. Among the measures listed in the Regulation, management plans may include "structural measures so eels can cross rivers and improving habitats in watercourses" and "temporary shut-down of hydropower station turbines".

The national management plan, integrating the measures taken on each catchment area, was submitted by the French State at the end of December. It is currently being examined by the Commission.

## **PCB** and **PCT**

The Group is subject to regulations relating to polychlorobiphenyls (PCB) and polychloroterphenyls (PCT) in the various countries where it operates, mainly in Europe.

European directive 96/59/EC of September 16, 1996 requires an inventory of equipment containing PCB and PCT, together with a national plan for decontamination and the gradual elimination of these substances, which are principally contained in certain electricity transformers and condensers. Decontamination of equipment containing these substances must be completed by December 31, 2010. In France, the national plan for the elimination and treatment of equipment containing PCB was approved by a Ministerial order dated February 26, 2003. For the approximately ten companies that have more than three hundred items of equipment, the special elimination plan for each of these companies (including EDF) is shown in Appendix 11 of the national plan. The individual plan to be implemented by EDF requires the treatment of a number of appliances each year, with all being treated as indicated above, at the latest by December 31, 2010.

#### **G**REENHOUSE GASES

Some of the EDF group's activities are subject to European directive 2003/87/EC (the "GHG directive") of October 13, 2003, which provides for a system for exchanging greenhouse gas emission quotas in the European Union, in accordance with the mechanisms set forth in the Kyoto Protocol. The directive provides, in particular, that greenhouse gas emission guotas must be allocated to the relevant companies under a "National Allocation Plan" (Plan National d'Allocation des Quotas, or "PNAQ"). In France, the GHG directive has principally been transposed by order n° 2004-330 of April 15, 2004 creating a greenhouse gas emission quota exchange system, and by the French Decree n° 2004-832 of August 19, 2004 relating to the greenhouse gas emission guota exchange system. Under these regulations, a first PNAQ allocating greenhouse gas emission guotas to the relevant companies for the period from 2005 to 2007 was approved in France by the French Decree n° 2005-190 of February 25, 2005. This plan was finally approved by the European Commission on May 18, 2005. Under the French PNAQ 1, EDF was granted an allocation of approximately 23.5 million tons of CO<sub>2</sub> each year for the period from 2005 to 2007 for its relevant facilities in France, i.e., for combustion facilities of more than 20 MW. Following a preparatory phase, on March 26, 2007, the European Commission pronounced its decision on the French national plan for allocating greenhouse gas emission quotas for the second trading period (2008-2012). PNAQ 2 was approved by the Decree dated May 15, 2007. It sets the total quantity of CO<sub>2</sub> quotas for this period at 132.8 Mt CO<sub>2</sub>, the quantity of guotas allocated to the electricity sector at 25.6Mt, and, finally, allocates EDF 16.58 Mt CO<sub>2</sub> per annum. PNAQ II stipulates that operators may use, within the limit of 13.5% of the quotas allocated for their facilities, URE or REC (credits from project activities) to meet their quota restitution obligation. It announced the elimination of the option of reserving quotas between the periods 2005-2007 and 2008-2012, but a legislative provision remains necessary to ensure consistency with the Environmental Code.

The order of May 31, 2007, establishes the list of operators allocated greenhouse gas emission quotas and their amounts for 2008-2012.

In order to compensate for the shortage of reserves, article 8 of the rectifying Finance Law for 2008 provides that the amount of quotas allocated to the electricity generation facilities, attributed but not yet delivered as of December 31, 2008, as defined in the national guota allocation plan for the 2008-2010 period, would be reduced by up to 10% in 2009, 20% in 2010, 35% in 2011 and 60% in 2012. The Finance Law also provides that the quotas made available as described can be sold by the French state under the terms set forth in a decree issued by the Conseil d'Etat. The determination of how the reductions over the 2009-2012 period are allocated is made annually by decree, after consultation of the commission for the examination of the national plan for the allocation of greenhouse gas emission quota.

European directive 2004/101/EC of October 27, 2004 (known as the "emissions credits" Directive) modifying directive 2003/87 was transposed into French Law, in the Environment code (articles L.229-5 et seq.), by French Law n° 2005-1319 of October 26, 2005 and implementation decree n° 2006-622 of May 29, 2006. Emissions credits generated by project activities that are eligible for the mechanisms provided for by Articles 6 and 12 of the Kyoto protocol (Joint Implementation (JI) and Clean Development Mechanism (CDM)) may be used in the context of the European market for the exchange of greenhouse gas emission quotas, to satisfy, subject to certain conditions, the annual obligations of quota restitutions that are borne by operators.

The measures were supplemented by Decree and order dated May 29, 2006, and an order dated March 2, 2007, describing the various stages of the natio-

nal procedure for the approval of projects. Two separate approval procedures are provided for, depending on whether these are CDM or JI projects conducted outside France by French operators, or JI projects implemented in France by foreign or French operators, so-called domestic projects.

Thus the operators affected, including EDF, may, under certain conditions, have recourse to credits from these projects to comply with their annual quota restitution obligations for CO<sub>2</sub> emissions from their facilities. The quantity of quotas allocated to EDF for the second period is considerably reduced, hence the company must make wider use of these mechanisms to cover its emissions. The use of credits for this purpose has, however, been limited, and the procedure for approval of projects at the national level is long and complex.

## NATURAL SITES AND CLASSIFIED SITES (BURIED LINES)

The EDF group is also subject to the regulations for classified and protected sites, under which electricity lines in France must be buried if they are located on classified sites or in national parks.

#### REGULATIONS RELATING TO HEALTH, HYGIENE AND SAFETY

#### **ASBESTOS**

The EDF group is also subject to laws and regulations concerning asbestos. In France, regulations namely require the identification of asbestoscontaining materials ("ACM") in buildings and, if necessary, monitoring measures or removal of the asbestos-containing materials. EDF is also subject to regulatory obligations regarding information disclosure and the protection of workers likely to inhale asbestos dust.

## LEGIONELLA

EDF operates air cooling towers, in particular, for the requirements of its electricity generation business, which are now subject to ICPE regulations. EDF must, among other obligations, carry out a methodical analysis of the risks of the proliferation of Legionella in its air cooling towers and implement a preventive maintenance plan for cleaning and disinfection. EDF is also obliged to carry out monthly or bimonthly analyses, depending on the type of facility involved. In the absence of any regulations relating to INB air cooling towers, the ASN requested in 2004 that EDF not exceed, pending the adoption of a specific order, certain concentrations of Legionella in its air cooling towers. In June 2006, additional measures were also requested to reinforce the existing surveillance plan, together with the conduct of detailed feasibility studies for each site to strengthen measures for the prevention of legionella in the systems.

## 6.5.4.5 PRINCIPAL DRAFT REGULATIONS LIKELY TO HAVE AN IMPACT ON THE EDF GROUP'S BUSINESS

A number of draft regulations, both at the European Union level and in France, of which the principal ones are described below, are likely to have a significant impact on the EDF group's business.

## **6.5.4.5.1 FUTURE EUROPEAN UNION REGULATIONS**

## 6.5.4.5.1.1 THE "ENERGY AND CLIMATE CHANGE PACKAGE"

## Presentation of the European Commission's "Energy and climate change package" on January 10, 2007

On January 10, 2007, the European Commission presented its "Energy and climate change package" (see section 6.5.1.1 ("European legislation")), which gathers all energy sector strategic guidelines presented to the European Council and Parliament, aiming at creating the basis of a true European policy destined to fight against climate change and reinforce energy safety and European Union competitivity. The "Energy and climate change package" includes a strategic analysis report and several other documents concerning the Internal Market of energy, the energy mix, renewable energies and climate change:

• Concerning the "Energy Package"

Following up work submitted by the European Commission on January 10, 2007, the College of Commissioners adopted a third set of legislative proposals to improve operation of the electricity and gas market on September 19, 2007.

Designated as the "third package", the Commission's proposals comprised five documents:

- A directive on electricity amending and supplementing existing directive 2003/54/EC:
- A directive on gas amending and supplementing existing directive 2003/55/EC;
- A regulation on electricity amending and supplementing existing regulation 1228/2003;
- A regulation on gas amending and supplementing existing regulation 1775/2005:
- A regulation instituting a European Agency for Cooperation for national energy regulators.

The Commission's proposals were structured around several core themes:

• The existing provisions concerning unbundling are not sufficient to ensure satisfactory operation of the market.

The Commission considers that if the transmission network manager has the status of legal entity within an integrated company, it may treat its associated companies favorably, thus non-discriminatory access to information is not guaranteed and incentives for investment are distorted.

As a result, the Commission considers, that a more effective separation of network managers is necessary.

To comply with this requirement, the Commission offered Member States a choice between pure and simple separation of transmission network manager's assets (Ownership Unbundling or OU), the solution it prefers, and the alternative of "independent network manager" (ISO - Independent System Operator).

Ownership unbundling imposes on Member States a requirement to ensure the same parties cannot exercise control over a supply company and simultaneously own a holding in, or exercise any rights over, a transmission network or transmission network manager. Vice-versa, control exercised over a transmission network manager excludes the possibility of owning any holding in, or exercising any rights over, a supply company.

The Commission nevertheless accepted that the Member States may prefer another solution which it describes as a "substitute solution". The option of the "independent network manager" allows vertically integrated companies to retain ownership of network assets, but requires the transmission network itself be managed by an independent network manager – an enterprise or entity separate from the vertically integrated company – which performs all the functions of a network manager. The directive also provides for the implementation of regulations and constant surveillance to guarantee the network manager remains truly independent of the vertically integrated company.

• The independence and powers of national regulators should be extended.

The Commission considers that independence of regulatory authorities is a key element for satisfactory operation of the electricity market. It proposes reinforcing this independence by granting regulatory authorities the status of legal persons, together with financial autonomy and appropriate human and financial resources.

Furthermore, the Commission considers it necessary to extend the jurisdiction of national regulators regarding market regulation.

The proposed extension of jurisdiction particularly affects monitoring compliance by network managers with rules governing third party access, management of congestion, and interconnections. It is also intended to allow national regulators to assess the investment plans of transmission network managers and evaluate the compatibility of such plans with the ten-year development plan for the entire European network.

A European Agency for Cooperation for energy regulators should be established.

The Commission considers it necessary to strengthen co-operation between national regulatory authorities by creating a European Cooperation Agency.

The main missions of the Agency will be as follows: providing a cooperative framework for national regulators and monitoring and assessing activities of European gas and electricity transmission network managers.

To this end, the Agency would have individual decision-making powers and a general consultative role.

• Firm co-operation between transmission network managers is necessary for the satisfactory integration of the gas and electricity markets.

Referring to network incidents and general failures occurring in recent years, the Commission considers voluntary co-operation between network managers is insufficient.

In consequence, it proposes to strengthen co-operation between transport network managers in several key areas, in particular preparing commercial and technical codes, co-coordinating and using networks, planning investments, research and innovation in the common interest.

To this end, the agency would have individual decision-making powers and a general consultative role.

• Close cooperation between transmission network managers is necessary for the satisfactory integration of the gas and electricity markets.

Referring to network incidents and widespread failures occurring in recent years, the Commission considers voluntary cooperation between network managers to be insufficient. In consequence, it proposes strengthening cooperation between transmission network managers in several key domains, including, in particular preparing business and technical "codes", coordinating the use of networks, planning investments, and research and innovation in the common interest.

In the first quarter of 2008, 8 Member States, including France and Germany, arguing that the separation of assets of the TSO is not required to improve the openness of markets, proposed a 3rd track based on three areas improving the governance of vertically integrated companies and their relationships with subsidiaried TSOs, the network development (development plan, investment control) and regional cooperation.

At the Energy Council of June 6, 2008, the European energy ministers succeeded in identifying general trends. Concerning the unbundling of the TSOs activities with the production/supply activities, the idea of a 3rd track (called "ITO" Independent Transmission Operator) was admitted, that aims to guarantee the independence of TSOs while preserving the financial interests of vertically integrated companies.

The Energy Council of October 10, 2008 adopted a new draft text which:

- Encourages regional cooperation;
- Poses the principle of separation of TSOs heritage, but leaves Member States the faculty of opting, as an exception, either for the ISO system, or for that of ITO;
- Strengthens the powers of regulatory authorities in particular as regards the control of TSOs' investments.

On March 24, 2009, a compromise on the text of the 3rd Directive was adopted by the members of the industry committee of the European Parliament and the Czech presidency. This compromise:

- gives Member States the possibility to choose one of the three options for separating the generation/supply activities from the network management activity: the separation of assets, the ISO or the ITO, the latter of which allows the maintenance of integrated supply and transportation companies subject to enhanced independence criteria;
- provides for the creation at the European Union level of an agency for international cooperation of regulators and strengthens the powers of national regulators;
- sets forth the principle of establishing European networks of transportation system managers;
- provides enhanced rights to consumers and especially to vulnerable consumers: improvement of procedures for changing supplier, claims' treatment, the need for Member States to adopt "appropriate measures" against "energy poverty", etc.

This text should be voted by the Parliament during the April (21 to 24) 2009 or May 2009 (4 to 7) session.

• Concerning the "Climate package"

The European Commission has presented on January 23, 2008, in the form of what is commonly known as the "Climate Package", several text proposals with respect to the combat against climate change.

This step follows the approval by the European Union Council, in March 2007, of an ambitious "climate" action plan which mainly suggested that the EU should reduce its greenhouse gas emissions by at least 20% by 2020, that renewable energies should represent 20% of the energy consumption by the same date, and that energy efficiency should improve by 20% (so-called "3x20" objective).

Tailored to meet that objective, the proposals by the Commission are mainly articulated around five texts: a directive to modify the EU emission trading scheme, an allocation of the efforts between Member States in areas not covered by this scheme (such as transportation, construction or services), a directive to promote renewable energy, a directive on CO<sub>2</sub> capture and sequestration and finally a new set of rules regarding State assistance in the field of environment.

## DIRECTIVE PROPOSAL REGARDING PROMOTION OF RENEWABLE SOURCES.

This proposal includes a binding proportion – without however specifying what the sanctions would be – of 20% of renewable energy in the final energy consumption of the EU. The global objective is then separated by State, considering, inter alia, the national energy mix, the potential of each state and its GDP. France has been attributed a binding objective of 23% of renewable energy. Each member State will also have to adopt by 2010 a national action plan regarding appropriate measures to achieve its objectives, and the progression regarding the renewable energy proportion will have to follow an indicative trend. Finally, the text considers the implementation of a transferable origin guarantees regime, meant to allow States to achieve their objectives in the most profitable way.

## DIRECTIVE PROPOSAL TO ENLARGE AND REINFORCE THE EU EMISSION TRADING SCHEME

Among the main proposed modifications to the trading scheme in place since 2005, the most notable are the replacement of national ceilings limiting the number of emission quotas by a unique ceiling for the EU, the introduction of a number of new industries (aluminum production, petrochemical, air transportation, etc.) and two additional gases, as well as a harmonization of the rules regarding free allocations. A considerable proportion of quotas will be auctioned: from 2013, quotas for the energy sector will be entirely auctioned; in other sectors, the allocation of free quotas will progressively disappear by 2020.

## DIRECTIVE PROPOSAL TO INTRODUCE A LEGAL FRAMEWORK FOR SAFE CAPTURE AND GEOLOGICAL SEQUESTRATION OF CARBON DIOXIDE

Capture and sequestration of carbon dioxide (CCS) designates a series of technological processes consisting in capturing the carbon dioxide present in gases emitted by industries, transporting it and injecting it in geological formations. These activities are included in the new EU emission quotas trading scheme. Additionally, in order to encourage capture of CO<sub>2</sub> in coal plants, the directive proposal provides that the operator of a new plant shall assess the feasibility of capture, transportation and sequestration of CO<sub>2</sub> emitted by its plant and, by 2020, all new plants should, if possible, be equipped with the CCS technology. The proposition also regulates sequestration, including through a regime of authorization to explore the underground and to use it for sequestration purposes, the realization of impact studies, environmental inspections and a transfer of liability to the competent national authority after the closing of a sequestration site.

## DECISION REGARDING A NEW SET OF RULES ON STATE ASSISTANCE TO **ENVIRONMENT**

The main objective of this proposal is to take into account the priority given to the fight against climate change and to instruments deemed necessary to achieve it (energy efficiency, renewable energy, "clean" technologies). It should allow for greater possibilities in the allocation of State assistance.

## 6.5.4.5.1.2 OTHER FUTURE EUROPEAN REGULATIONS

## **Environment**

Following the CAFE (Clean Air For Europe) program, launched in 2001 by the European Commission to improve the quality of air in Europe and the topical strategy on atmospheric pollution of September 21, 2005 (communication from the Commission to the Council and the European Parliament) setting out the integrated actions to be taken to reduce the harmful effects of atmospheric pollution on human health and the environment by 2020, a revision of European directive 2001/81/EC (NEC) setting national emission ceilings for certain atmospheric pollutants was initiated. The preliminary consultation phase is now complete; thus a proposal for a modifying directive was scheduled for publication by the Commission in February 2008, but this was deferred until April 2008, notably because of the EU's determination to take account of the "energy package" and difficulties linked to its distribution among Member States. The draft directive would in particular propose instituting a market for SOx and NOx emissions for Member States and tightening up national emission ceilings.

A draft directive on geological storage of carbon dioxide intended to establish a legal framework in the European Union for such storage, with a view to reducing CO<sub>2</sub> emissions in the atmosphere, is in course of preparation. This should modify directive 2001/80/EC on limiting emissions of various pollutants in the atmosphere from large combustion plants and force operators of new facilities to assess the technical feasibility of retaining and storing CO<sub>2</sub> and provide for implementation of a CO<sub>2</sub> retention system. The regulation will thus affect EDF. However, the date on which the obligation to equip combustion facilities with such a retention system remains uncertain and depends primarily on evidence of the technical and commercial feasibility of retaining and storing CO<sub>2</sub>.

The European directive draft of October 24, 2005 which intends to create an European framework in order to protect and preserve the aquatic environment, sets forth that the States will determine the strategy for European maritime waters to obtain, by 2021, a good ecological level of the aquatic environment; monitoring programs and various measures will be adopted. Some of EDF's generation facilities (offshore wind turbines, sea-side power plants or even inland power plants if they can directly or indirectly affect the aquatic environment) could in time be subject to new restrictions.

The draft directive on environmental quality standards in the area of water, amending directive 2000/60/EC will establish environmental quality standards limiting the quantity of chemicals (called priority substances) presenting a significant risk to the environment or health in surface water (watercourses, lakes, coastal waters) in the European Union. It will require Member States to ensure compliance with the standards. This obligation could give rise to more rigorous provisions concerning emissions and waste discharge from EDF plants.

Various reasons, including some ecological disasters associated with maritime transport, have led the Commission to prepare a new draft directive on protecting the environment through recourse to criminal law (adoption by the Commission on February 9, 2007). This proposal is intended to identify acts that cause serious damage and are liable to punishment, and to set minimum penalties. As it currently stands, the proposal generally raises the criminal penalties – including for nuclear activities – compared to those already applicable under French Law for similar acts. However, a decision of October 23, 2007, by the CJEC (Court of Justice of the European Communities) on pollution by ships, while confirming the in-principle jurisdiction of the Commission and the Parliament to define offences in order to reinforce environmental protection, rejects their jurisdiction to identify the type and severity of criminal penalties. In these conditions, the current proposal would have to be redrafted without the penalties fixed therein, probably by replacing them by an affirmation of the need to impose effective criminal penalties, which are proportionate and dissuasive; this would allow each Member State a degree of flexibility.

As recommended in the sixth environmental action program, the European Commission published a draft directive defining a framework for the protection of soils on September 22, 2006, which was adopted by the European Parliament at its first reading on November 14, 2007. The European Council of Environmental Ministers, meeting on December 20, 2007, did not adopt this draft directive. Several States opposed it, including France, on the basis of the principle of subsidiarity. The draft seeks to define principles and actions common to all Member States for actively fighting deterioration of soils and preserving their capacity to fulfill their ecological, economic, social and cultural functions. The draft could be reissued at the initiative of the next EU Presidency.

The Commission has instigated the procedure for revising the IPPC Directive ("Integrated Pollution Prevention and Control") of September 24, 1996 (which should be have been transposed by Member States by October 2007 in 2005 (public consultations, in particular, were conducted from May to June 2007)). On December 21, 2007 the European Commission adopted a communication on: "Improving policy on industrial emissions and a draft directive on industrial emissions" (integrated reduction and prevention of pollution). This draft directive revises and reworks, in a single legal text, several existing texts, including the IPPC, GIC, Waste Incineration, and VOC

directives. The revision should lead to increased use of Best Available Technologies and extending the scope to other activities. The revised directive should come into force in 2016.

## Nuclear

The Euratom Treaty celebration was an opportunity for European institutions to draw up an inventory of its applications. It emerged that the Parliament would like joint decision-making to be incorporated in the Euratom Treaty in order to be involved in the decision-making process. Nevertheless, the Community's knowledge of nuclear energy and its relatively recent role in the current energy and climate context were acknowledged, and the fundamental aspects of the Treaty should not be modified in the immediate future.

Moreover, a high-level group on nuclear safety and waste management comprising representatives of Member States and a representative of the Commission was created by the Council during spring 2007. It is responsible for identifying coordinated approaches and proposing recommendations on the safety of facilities and waste management, financing decommissioning, and the management of waste and spent fuel. Its work could eventually result in changes to EU nuclear regulations. The first meeting was held on October 12, 2007.

The Commission would like to harmonize the regimes of nuclear civil liability. It is currently conducting an impact study taking into account the Paris and Vienna Conventions and envisages preparing a "Communitywide" regime.

#### **6.5.4.5.2** FUTURE REGULATIONS IN FRANCE

EDF's liability for environmental damages caused by some of its non-nuclear activities should be increased by the coming transposition into French Law of European directive 2004/35/EC of April 21, 2004. The directive provides for a non-retroactive system of objective liability, limited to certain particularly serious environmental damages. Accordingly, the operator of a facility shall be liable if it is possible to establish a causal relation between the damage and its activity. Moreover, the objective sought is to achieve, as far as possible, restoration of the environment which has been damaged. The new regime does not modify in any way the existing rules and indemnities for third parties who have been the victims of pollution. To date the directive has not rendered mandatory a system of financial guarantees.

The Group will also be subject to European directive 2004/40/EC of April 29, 2004 concerning the minimum safety and health requirements as for what concerns employee exposure to risks due to physical agents (electromagnetic fields), which shall be transposed at latest by April 30, 2008. This directive sets forth the minimum requirements concerning risks evaluation and reduction, as well as requirements applicable to employee information and training. Such requirements will affect RTE-EDF Transport and ERDF, taking into consideration the electromagnetic fields generated by lines or source stations during works whether under power or otherwise. They will also affect EDF's Generation-Engineering Division which employs electric maintenance employees close to the alternators placed near the exit of the generation plant.

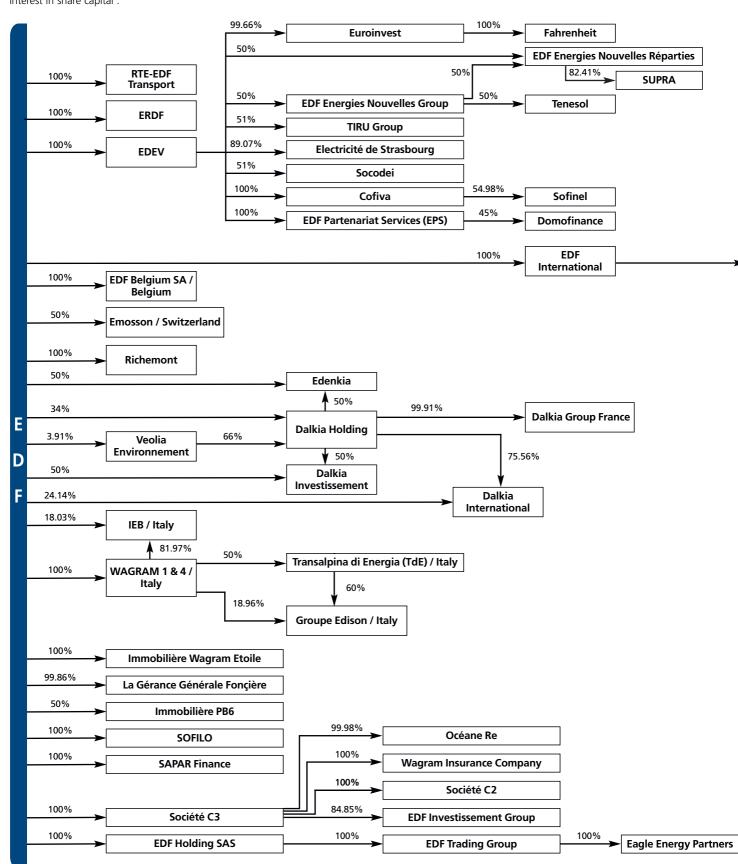
The European directive dated March 14, 2006, on energy efficiency in final utilizations and energy services, which sets forth a tentative goal for consumption reductions for Member States and leaves a significant place for the subsidiarity principle should be transposed into French Law by May 17, 2008. Each State will have to present on three occasions an action plan for energy efficiency (June 30, 2007, June 30, 2011 and June 30, 2014) and the public sector will have to play an "exemplary role". In addition to the specific effort of customers' information that the directive put on energy suppliers (invoicing and counting requirements), the energy suppliers role is left to Member States' assessment. Thus, this directive's impact will have to be assessed in view of its future translation.

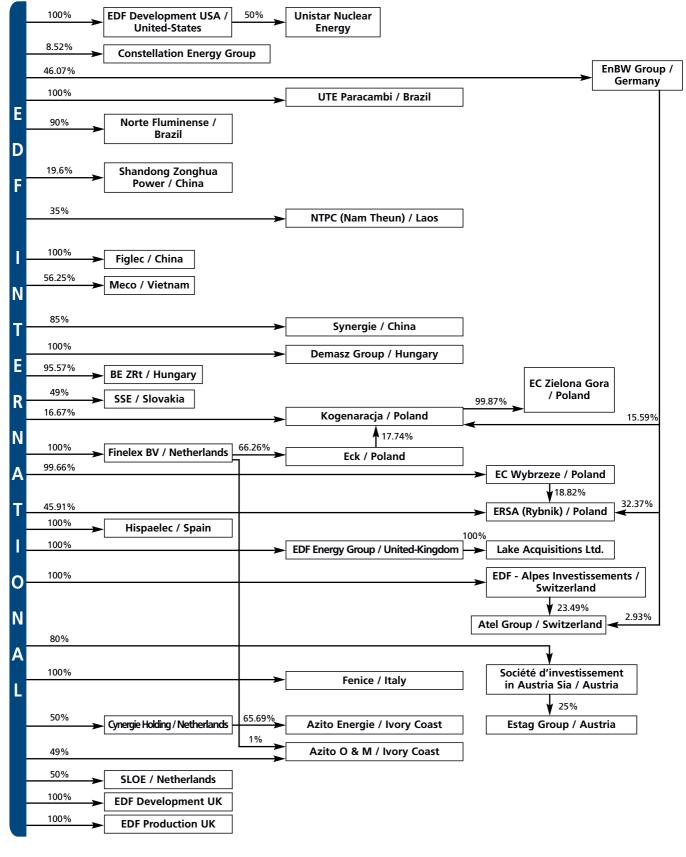
A series of regulations is anticipated following the "Grenelle de l'environnement" (French multi-party forum on the environment) which should, to varying degrees, affect the upstream and downstream activities of EDF. Under the supervision of the follow-up and assessment committees representing stakeholders (trade unions, NGOs, company representatives, authorities, elected representatives), working committees were preparing legal and practical measures implementing the orientations and objectives announced by the President of the Republic of France and the findings of the Grenelle environmental round tables held from October 24 to October 26, 2007. A report was submitted on January 6, 2008, by Mrs. Corinne Lepage and formulates proposals in the areas of information, expertise and responsibility. During Fall 2008, the French government created a committee in charge of reflecting on how to terminate the TaRTAM and on the evolution of regulated tariffs. The committee, which is chaired by Mr. Champsaur and composed of members of the parliament and experts, should issue its report by Spring 2009.

## **Organizational structure**

7

A simplified organizational chart for the Group, as of December 31, 2008, is presented below. The percentages for each entity represent the ownership interest in share capital .





## Organigram

The names of all the companies within the Group's consolidation scope are mentioned in note 43 to the consolidated financial statements for the year ended December 31, 2008.

## LAKE ACQUISITIONS — BRITISH ENERGY

Lake Acquisitions Limited ("Lake Acquisitions"), a wholly-owned subsidiary of EDF in the UK which served as the acquisition vehicle in the context of the tender offers launched over British Energy (see sections 6.3.1.1.1.4 ("Lake Acquisitions") and 6.3.1.1.3.1 ("Offers")), held as at December 31, 2008 approximately 26.53% of the share capital of British Energy. On January 5, 2009, the offers had become unconditional in all respects and the acquisition had become effective. On this date, Lake Acquisitions owned approximately 96.44% of the share capital of British Energy (see section 6.3.1.1.3 ("British Energy")). As at the date of the filing of this Document de Référence, Lake Acquisitions holds all the share capital of British Energy except for the "Special Share" (being the special rights redeemable preference share of £1 held jointly by the Secretary of State of Her Majesty's Government and the Secretary of State for Scotland).

## ATEL GROUP/SWITZERLAND

Following the combination of the activities of Atel and EOS Holding on January 27, 2009 as part of the agreement dated December 18, 2008, the Group holds as at the date of the filing of this Document de Référence, an interest of approximately 25% in the share capital of the Swiss energy company Alpiq (see section 6.3.1.4.1 ("Switzerland")).

## Information about the subsidiaries

For a description of the activities of EDF's subsidiaries, their recent acquisitions, their consolidated financial statements and/or their economic weight in the Group, see section 6.3 ("Presentation of the EDF group's International Activity") of this Document de Référence. In addition, note 7.1 to the consolidated financial statements for the year ended December 31, 2008, provides further financial information on the Group companies presented by geographical zone.

## **Functions exercised by EDF's managers**

Functions exercised by EDF's managers in the Group's subsidiaries are set out in Annex C of this Document de Référence.

## **Contracts within the Group**

## CASH POOLING AGREEMENTS ENTERED INTO BETWEEN EDF **AND ITS SUBSIDIARIES**

Thanks to the system for cash pooling set up by EDF, all the cash positions of the subsidiaries can be centralized and the Group's liquidity can be optimized. This cash pooling consists in grouping all the cash balances of the subsidiaries with that of the parent company. Some French and international subsidiaries. RTE-EDF Transport does not participate.

The system for cash pooling in place for the companies of the EDF group is provided for by the liquidity agreements. Bilateral agreements between EDF and each subsidiary define the specific conditions for each arrangement, such as: remuneration of the balances, etc.

On the international level, subsidiaries taking part in the system enter into a framework agreement, whereby EDF serves as the Liquidity Center.

EDF also centralizes all the currency flows from its French subsidiaries.

## FINANCIAL FLOWS BETWEEN EDF AND ITS SUBSIDIARIES

Apart from the financial flows relating to cash pooling agreements mentioned above, financial flows between EDF and its subsidiaries also relate to distributions of dividends within the Group. Although a substantial part of the dividends paid by some of the Group's subsidiaries (including EnBW and EDF Energy) are exclusively paid to EDF International (approximately €474 million for the financial year ended December 31, 2008), EDF received approximately €581 million from EDF International and approximately €975 million of dividends from its other consolidated subsidiaries for the same financial year.

Other financial flows between EDF and its subsidiaries are loans, asset transfers and guarantees effected by the parent company of the Group for the benefit of certain subsidiaries.

In the framework of this Group's financing centralization politic decided in 2006, EDF centralizes the financing of its English subsidiaries (excluding financing of regulated activities). EDF created in 2007 EDF Investissements Groupe which centralizes, in particular, medium and long term intra-group financing.

The financial flows relating to the fees paid by the subsidiaries are not significant. In effect, the Group's subsidiaries usually have their own central services and operate under their own brands.

A description of the financial flows relating to contracts between EDF and its subsidiaries is set forth in chapter 19 ("Related party transactions") below.

## Property plant and equipment

**8.1** Service sector real estate assets

133

- **8.2** Employers' participation in the construction effort (participation des employeurs à l'effort de construction, or "PEEC")133
- **8.3** Subsidized home ownership loans

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# 8.1

## Service sector real estate assets

The Real Estate Pole (which includes the Real Estate Division (Direction de l'Immobilier) and its real estate attached subsidiaries) is in charge in France of providing the Group entities with real estate services by managing and optimizing a service sector real estate portfolio of nearly 4.5 million square meters of service premises, of which approximately 77% is owned outright by the Group and 23% is leased from third parties (leases and concessions).

The Real Estate Division is in charge of real estate assets' management, lease management, the technical use of the premises as well as of the maintenance of the premises and of the services provided to the space users, by creating a sub-lease system for Group entities and units. By taking leases from third parties, the Real Estate Division has taken commitments amounting for EDF to €618 million for the period 2009-2019, as developed in the notes to the consolidated financial statements.

## **Employers' Participation in the Construction Effort (Participation** des Employeurs à l'Effort de Construction, or "PEEC")

EDF is subject to an obligation to participate each year in the construction effort. Its contribution was 0.45% of its payroll, which represented €13.2 million for 2008. In exchange for this payment.

EDF's employees benefit from services intended to facilitate their residential mobility: assistance with renting, assistance with house purchase, assistance with mobility, advice on financing

# 8.3

## Subsidized home ownership loans

As part of its social policy, EDF supports its employees in purchasing their principal residence. Following the conclusion of a cooperation arrangement with the Crédit Immobilier de France ("CIF"), the latter now takes care of granting, financing, and managing loans to the company's employees. EDF grants compensation to the CIF for the gap resulting from the difference between the subsidized rate (at which CIF grants loans to EDF employees) and the rate resulting from the bank survey carried out in 2005 on the basis of which the CIF was chosen.

As of December 31, 2008, the "non-securitized", outstanding balance for personal residence mortgages was €8.7 million on EDF's balance sheet.

## **Operating and Financial Review 9.1** Key figures 135 **9.2** Economic environment and significant events 136 **9.3** Introduction to the 2008 results analysis 147 **9.4** Results for 2008 148 **9.5** Principal accounting methods sensitive to the use of estimates and judgments 150 **9.6** Segment reporting of financial information 151 **9.7** Analysis of the consolidated income statement for 2008 and 2007 152 9.8 Breakdown of EBIT by geographical area 157 **9.9** Net indebtedness, cash flow and investments 164 **9.10** Management and control of market risks 170 **9.11** Provisions 180 **9.12** Off balance sheet commitments (commitments given) 181 **9.13** Subsequent events 183

## Incorporation by reference

Pursuant to article 28 of Regulation (EC) no 809/2004 dated April 29, 2004, the operating and financial review for the fiscal year ended December 31, 2007 is included in Chapter 9 of the Group's 2007 Document de Référence (pages 130 to 175) and is incorporated by reference herein.

## **Key figures**

The figures presented in this document are taken from the EDF group's consolidated financial statements at December 31, 2008.

Key figures at December 31, 2008 are as follows:

## **Extracts from the consolidated income statements**

Year ended December 31 (in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	64,279	59,637	4,642	7.8	10.6
Operating profit before depreciation and amortization (EBITDA) excluding the impact of the Law of August 4, 2008	15,435	15,210	225	1.5	3.7
Operating profit before depreciation and amortization (EBITDA)	14,240 <sup>(2)</sup>	15,210	(970)	-6.4	-4.2
Operating profit (EBIT)	7,911	9,991	(2,080)	-20.8	-18.9
Income before taxes of consolidated companies (1)	4,744	7,457	(2,713)	-36.4	-35.2
Group net income	3,400	5,618	(2,218)	-39.5	-38.2

<sup>(1)</sup> The income before taxes of consolidated companies corresponds to the EDF group's net income before income taxes, share of net income of companies accounted for under the equity method, net income from discontinued operations and minority interests.

## Extracts from the consolidated balance sheets

## Year ended December 31

(in millions of Euros)	2008	2007
Non-current assets	141,132	134,572
Current assets	59,154	51,308
Assets classified as held for sale	2	269
TOTAL ASSETS	200,288	186,149
Equity (EDF share)	23,058	27,210
Minority interests	1,784	1,586
Non-current provisions	43,415	44,038
Other non-current liabilities	73,814	64,623
Current liabilities	58,217	48,578
Liabilities related to assets classified as held for sale	0	114
TOTAL EQUITY AND LIABILITIES	200,288	186,149

## **Extracts from the consolidated cash flow statements**

Year ended December 31 (in millions of Euros)	2008	2007	Variation	Variation (%)
Net cash flow from operating activities	7,572	10,222	(2,650)	-25.9
Net cash flow used in investing activities	(16,665)	(5,428)	(11,237)	207.0
Net cash flow from (used in) financing activities	8,811	(2,116)	10,927	N/A (1)
Net increase (decrease) in cash and cash equivalents	(282)	2,678	(2,960)	N/A

(1) N/A: not available.

<sup>(2)</sup> This includes the provision of €1,195 million established following prolongation of the transition tariff system (TaRTAM). Without this provision, EBITDA would amount to €15,435 million, €225 million or 1.5% higher than 2007 with organic growth of 3.7% (see the line "Operating profit before depreciation and amortization (EBITDA) excluding the impact of the Law of August 4, 2008").

## Net indebtedness

Year ended December 31 (in millions of Euros)	2008	2007	Variation	Variation (%)
Loans and other financial liabilities	37,451	27,930	9,521	34.1
Derivatives used to hedge liabilities	(381)	23	(404)	N/A <sup>(1)</sup>
Cash and cash equivalents	(5,869)	(6,035)	166	2.8
Liquid assets	(6,725)	(5,682)	(1,043)	18.4
Net financial liabilities from companies disclosed in non-current liabilities related to assets classified as held for sale	0	33	(33)	N/A
NET INDEBTEDNESS	24,476	16,269	8,207	50.4

<sup>(1)</sup> N/A: not available.

## **Economic environment and significant events**

## 9.2.1 Economic environment

## 9.2.1.1 THE FINANCIAL MARKET CRISIS, THE ECONOMIC CRISIS AND GDP GROWTH

The world economy has seen a sharp slowdown since mid-2008.

The crisis originated in the real estate and finance sectors, but spread progressively to all economies. GDP began to contract in the principal OECD countries – the United States, Japan, Europe – from the third quarter of 2008. The downturn in business was even more marked in countries whose economies depend largely on the prices of commodities and hydrocarbons, while the major exporting nations such as China registered lower levels of growth.

Volatility intensified on most financial markets, particularly on foreign exchange markets where the combined effect of an economic slowdown, deterioration in the balance of payments and interest-rate reducing policies, applied to varying extents in different countries, caused serious fluctuations.

Since the second half of 2008, governments have taken a range of large-scale measures intended to stabilize and reinforce their banking and finance systems, increase liquidity on the interbank market and restimulate the economy, but the general consensus in expert opinion is that 2009 will be a difficult year for finance and the economy.

Most of the gradual worldwide slowdown over the past year is explained by three jolts to the economy (1). In many countries, correction of the real estate bubble brought household investments down; the very high rises in commodity prices until the summer drastically reduced the buying power of household income; and in the wake of the subprimes crisis, considerable turbulence on the financial markets led lenders to tighten their credit conditions.

In the third quarter of 2008, activity retreated in the advanced economies<sup>(2)</sup> (-0.2% after 0.2% growth in the second quarter), primarily due to shrinking business investments and household consumption levels. This affected all leading economies, particularly the United States (-0.1%), Japan (-0.5%), the United Kingdom (-0.5%) and the Euro zone (-0.2%). Germany and Italy expeIn the **Euro zone**, investment and foreign trade were the factors underlying this further quarter of decline in economic activity.

GDP is expected to register another decrease in the fourth quarter (-0.7%); private consumption should continue to suffer from the lower buying power of 2008 despite an ebb in inflation at the end of the year; investment should retreat further in response to the low demand prospects and the increasing difficulty of obtaining financing.

In France, economic intelligence forecasts a 0.8% decline in activity for the fourth quarter of 2008. Annual average growth should reach 0.8% compared to the 2.1% registered in 2007.

In the United Kingdom, activity is expected to fall off sharply in the fourth quarter. The pound sterling, which had stabilized against the Euro, began a serious fall in value in early November (ending 2008 23.1% below its value at December 31, 2007).

The United Kingdom's annual average GDP growth should reach 0.8% for 2008, against 3.0% in 2007.

In Germany, growth is expected to stand at 1.3% for 2008, compared to 2.6% for 2007.

Italy should register a -0.5% decline in GDP, after 1.4% growth in 2007.

## 9.2.1.2 TRENDS IN MARKET PRICES FOR ELECTRICITY AND THE PRINCIPAL ENERGY SOURCES - VOLATILITY ON THE COMMODITY AND ENERGY MARKETS

## 9.2.1.2.1 WHOLESALE ELECTRICITY PRICES

SPOT PRICES IN FRANCE, GERMANY, THE UNITED KINGDOM AND ITALY (3)

In 2008, spot prices for electricity on Europe's principal wholesale markets were on average higher than in 2007.

rienced a marked downturn for the second consecutive guarter (-0.5% in both countries).

<sup>1</sup> Sources for this and the following paragraphs are: Note de conjoncture INSEE, December 2008 – extracts; and Point de conjoncture INSEE, October 2008 – extracts. Annual figures for 2008 are estimates reported by INSEE.

<sup>2</sup> Countries belonging to the OECD (Organization for Economic Cooperation and Development).

<sup>3</sup> France: average previous day Powernext price for same-day delivery; Germany: average previous day EEX price for same-day delivery; United Kingdom: average previous day Platts OTC price for same-day delivery; Italy: average GME (PUN) price for same-day delivery.

In France, average 2008 spot prices were €69.2/MWh base load and €91.9/MWh peak load, respectively 69% (+€28.3/MWh) and 57% (+€33.4/MWh) higher than in 2007. The sharp increase in spot electricity prices in France is due to both long-term factors inherent to the market and the current economic environment:

- the rising price of CO<sub>2</sub> emission quotas due to more restrictive allocation plans at the start of Phase II (2008-2012) of the Kyoto protocol to limit CO<sub>2</sub> emissions, and the application of the European Large Combustion Plant Directive (LCPD) (1) introducing stricter constraints for the use of fossil-fired plants;
- the high rise in fossil fuel prices and lower nuclear output in the second and third quarters of 2008.

In contrast to the final guarter of 2007 which saw three cold spells forcing spot prices upwards, prices remained more stable in the last guarter of 2008, with no peaks.

In Germany, average spot prices for 2008 stood at €65.8/MWh baseload and €88.1/MWh peakload, up by 73% (+€27.8/MWh) and 57% (€31.9/MWh) respectively from 2007. Although they followed a similar trend to French prices, German prices were again lower, by an average of €3.4/MWh baseload and €3.8/MWh peakload in 2008.

In the United Kingdom, average 2008 spot prices stood at €90/MWh baseload and €113.7/MWh peakload, an increase of 113% (+€47.8/MWh) and 103% (+€57.8/MWh) respectively. Prices more than doubled from 2007 levels as a result of the significant increase in gas prices, and the LCPD's entry into force.

In Italy, average spot prices also rose in 2008, but much less than in other European countries, amounting to €86/MWh baseload and €112.5/MWh peakload, up by 20% (+€14.4/MWh) and 8% (+€7.9/MWh). This smallerscale increase is attributable to high hydraulicity in the southern Alps during the first six months of the year, moderate temperatures and new gas-fired plants coming on line.

## 9.2.1.2.2 FORWARD ELECTRICITY PRICES IN FRANCE, GERMANY AND THE UNITED KINGDOM (2)

After increasing considerably in the first half of 2008, forward electricity prices fell back markedly in the second half-year to close to late 2007 levels, although the annual average forward price was higher than for 2007.

In France, the average price under the 2009 annual contract was €73.9/MWh baseload and €103.2/MWh peakload, respectively 36% (+€19.5/MWh) and 34% (+€26/MWh) higher than the 2008 annual contract price quoted in 2007. Forward electricity prices followed the same pattern as fossil fuel and CO<sub>2</sub> prices. They rose by €30.9/MWh over the first half-year to a record level of €93/MWh on July 1, then dropped sharply, standing at €60.9/MWh at the end of December, 2008.

In Germany, 2009 annual contract prices followed the same trend as in France, driven by fossil fuel and CO<sub>2</sub> prices. The average baseload contract price was €70.1/MWh, a 25% increase (+€14.2/MWh from the 2008 annual contract price quoted in 2007). Prices rose less in Germany than in France, widening the annual contract price differential between France and Germany: the French price was €3.8/MWh on average above the

German price over 2008, reversing the trend of 2007 when French prices were lower by an average €1.5/MWh. The differential reached a record level of €9.3/MWh in early October 2008 due to the French market's sensitivity to temperatures, as market actors anticipated winter tensions on the supply-demand balance.

In the **United Kingdom**, forward electricity prices followed gas price trends. After a historic peak of €113.5/MWh on July 1, the April ahead (3) baseload contract price collapsed in the second half-year to end the year at €54.5/MWh, below French annual contract levels.

## 9.2.1.2.3 CO<sub>2</sub> EMISSION QUOTA PRICES (4)

The price of CO<sub>2</sub> emission quotas for Phase II of the trading scheme (2008-2012) for delivery in 2009 was €23.1/tCO<sub>2</sub> on average for 2008, up by €3.5/tCO<sub>2</sub> from quotas for delivery in 2008 quoted in 2007. This increase was caused by:

- market actors anticipating more restrictive allocation plans for Phase II (2008-2012) than for Phase I (2005-2007); and
- the average rise in all other energy commodities over the period.

Prices for CO<sub>2</sub> quotas for delivery in 2009 reached €30.7/tCO<sub>2</sub> on July 1 before falling back to €15.9/tCO<sub>2</sub> at the end of the year, in line with fossil fuel price movements.

## 9.2.1.2.4 FOSSIL FUEL PRICES

After rising significantly until the end of the first half-year of 2008, fossil fuel prices underwent a sharp fallback in the second half of the year caused by the economic and financial crisis.

Forward coal prices (5) increased sharply from mid-2007. 2008 annual contract prices for coal (delivery in Europe) stood at an average \$139.6/t, compared to \$85.2/t in 2007 (+64%). An initial upward phase lasted until July 1, when the price reached \$218/t. This rise is attributable to strong tensions in the worldwide supply-demand balance for coal, particularly in the Asia-Pacific zone, and rising maritime freight prices. Forward coal prices then dropped in the second half-year and ended the year at \$86/t, mainly due to the economic and financial crisis which damaged prospects for worldwide coal demand, the collapse of maritime freight prices, and the withdrawal of purely financial actors.

The average oil price (6) (Brent) for 2008 was \$98.5/barrel after the 2007 average of \$72.7/barrel (+35%). After soaring since the summer of 2007 to peak at \$146.1/barrel on July 3, 2008, oil prices receded strongly in the second half-year of 2008 as worldwide demand prospects were affected by the economic and financial crisis and the dollar gained strength against the Euro. The year-end price was \$45.6/barrel.

Natural gas prices (7) under the United Kingdom's annual contract stood at an annual average of £73.7/therm in 2008, up by 85% from 2007. In line with oil price developments, gas prices reached £99.4/therm on July 4, 2008, a record for an annual gas contract, before falling back to £58.9/therm by the end of the year.

<sup>1</sup> Directive 2001/80/CE of October 23, 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants.

<sup>2</sup> France and Germany: average Platts 2009 annual contract index; United Kingdom: average Platts annual contract index, April 2008 then April 2009 (in the UK annual contract deliveries take place from April 1 to March 31 under the NETA calendar). Italy has no forward electricity market.

<sup>3</sup> The UK 'April Ahead 2008' contract runs from April 1, 2008 to March 31, 2009.

<sup>4</sup> Average Argus index for the first annual contract of Phase II (2008-2012).

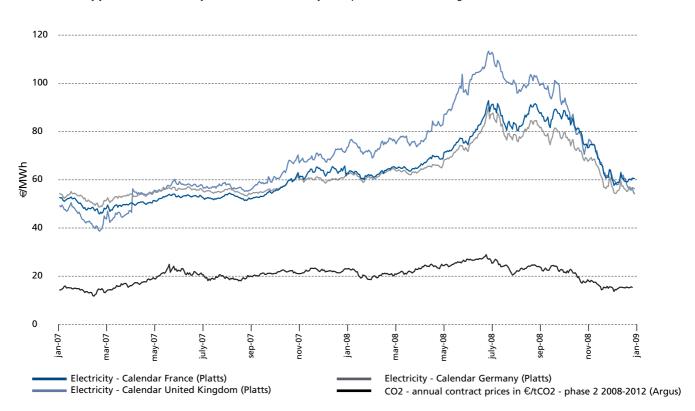
<sup>5</sup> Average Argus index for the first annual contract delivery in Europe (CIF ARA).

<sup>6</sup> Brent first reference crude oil barrel, IPE index (front month).

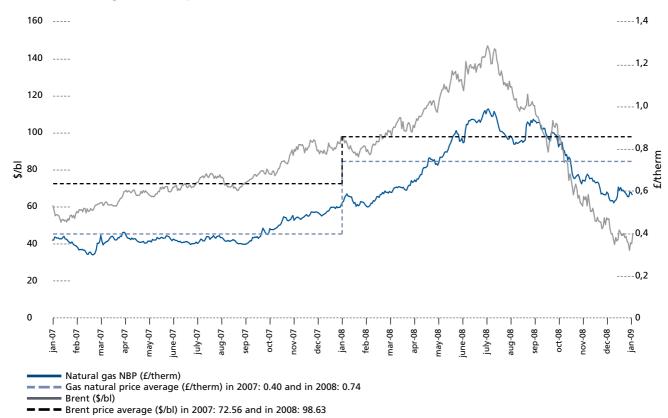
<sup>7</sup> Platts average index for the first annual contract, delivery starting from October of the following year for the UK (NBP).

## Forward electricity prices in France, Germany and the United Kingdom and CO<sub>2</sub> emission quota prices (Phase II, 2008-2012)

The "electricity year" runs from January 1 for France and Germany and April 1 for the United Kingdom



## Forward natural gas and oil prices, 2007-2008



## 9.2.1.3 ELECTRICITY CONSUMPTION (1)

Despite the difficult economic climate, electricity consumption in France in 2008 registered a 2.9% (2) increase from 2007 due to the weather conditions, the extra day in February (2008 was a leap year) (3) and a general

The increase in electricity consumption primarily concerns customers connected to low-voltage supply (residential customers, small business customers, public authorities, public lighting, and various services). Compared to 2007, this domestic consumption increased significantly: +3% approximately after adjustment for weather conditions (4) (+2.2% in 2007), and +6% in gross value. The effect of the higher consumption levels was accentuated by the temperatures of 2008, which were colder on average than in 2007.

Consumption by large industrial users (5) (excluding the energy sector (6)), in contrast, declined by 2.6%, confirming a downward trend already observed over the previous three years: consumption by all major industrial customers directly connected to the RTE network decreased by 3.2% in 2005, 1% in 2006 and 1.4% in 2007.

This trend was most pronounced in the last three months of 2008.

In the United Kingdom, estimated electricity consumption amounted to 326 TWh, down by 0.3% from 2007.

In **Germany**, electricity consumption rose by 0.5% from January to October, but fell in the final quarter of 2008.

In Italy, estimated electricity consumption was 337.6 TWh, 0.7% lower than in 2007.

## 9.2.1.4 ELECTRICITY AND NATURAL GAS SALES TARIFFS

In France, the law of August 4, 2008 on economic modernization among other measures, prolonged the TaRTAM transition tariff system to June 30, 2010. This law also extended eligibility for the transition tariff to all final customers, even those who were previously eligible but had not yet opted into the system.

For further information on the financial consequences of this extension, see section 9.7.2.6, "Effects of the law of August 4, 2008".

On August 15, 2008, the electricity sales tariffs fixed by the authorities were raised by 2% for the "blue" tariff, 6% for the "yellow" tariff and 8% for the "green" tariff.

In **Germany**, EnBW increased its basic electricity tariff by an average 4.9% from July 1, 2008, guaranteeing price stability for 1 year.

EnBW also raised its natural gas tariffs, initially by 6.9% on January 1, 2008, and subsequently by 19.7% on November 1, 2008. However, natural gas tariffs were then reduced by 4% on January 1, 2009.

In the United Kingdom, EDF Energy applied an initial rise in electricity and natural gas prices on January 18, 2008 (7.9% and 12.9% respectively), followed by a second rise on July 25 (17% for electricity and 22% for natural gas).

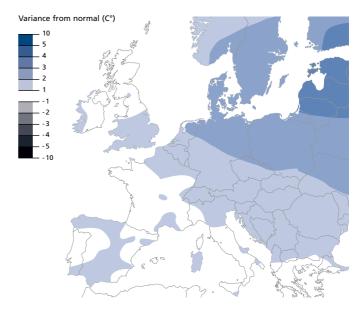
## 1 Estimates for countries other than France are supplied by EDF's local subsidiaries.

- 2 Source: RTE EDF Transport.
- 3 Included in first-half 2008.
- 4 Adjustment applied for both 2007 and 2008.
- 5 Customers connected to the RTE network.
- 6 Adjusted for the effect of the leap year.

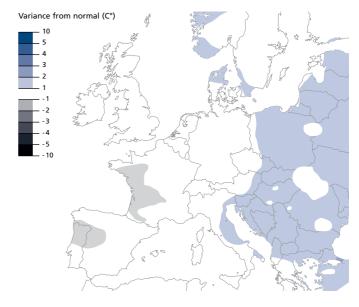
## 9.2.1.5 WEATHER CONDITIONS

#### **9.2.1.5.1** TEMPERATURES

## Temperature variance from normal levels, January to June 2008 (7) (First half-year of 2008)



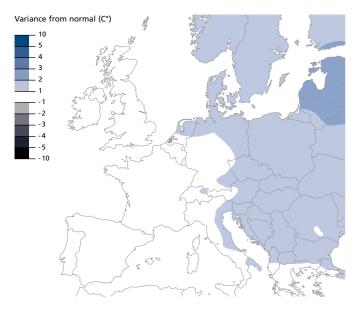
## Temperature variance from normal levels, July to December 2008 (8) (Second half-year of 2008)



<sup>7</sup> Comparison of average temperatures with normal temperatures over 30 years. For Western Europe, normal temperatures are measured from 1971 to 2000, and for Eastern Europe from 1961 to 1990.

<sup>8</sup> Comparison of average temperatures with normal temperatures over 30 years. For Western Europe, normal temperatures are measured from 1971 to 2000, and for Eastern Europe from 1961 to 1990.

## Temperature variance from normal levels, January to December 2008 (1) (full year 2008)

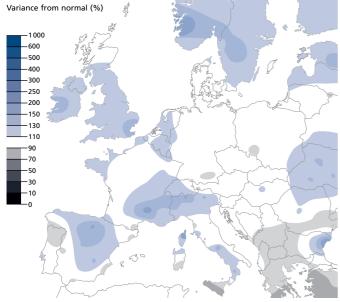


2008 was a cold year overall weather in France, due to the following factors:

- January, February and December 2008 were much colder than in 2007;
- April 2008 temperatures were 4°C lower than in April 2007;
- July and August were slightly warmer than in 2007, although still cooler than normal for the season;
- the onset of winter was early.

## 9.2.1.5.2 RAINFALL

## Rainfall: January to December 2008 (2)



After two particularly dry years, rainfall in France returned to a more normal level. The annual rainfall level was in fact above normal overall due to the very wet spring and autumn, and a droughtless summer.

This situation was especially notable in south-east France (where many EDF dams are located) and the Massif Central.

- 1 Comparison of average temperatures with normal temperatures over 30 years. For Western Europe, normal temperatures are measured from 1971 to 2000, and for Eastern Europe from 1961 to 1990.
- 2 Comparison of annual rainfall with normal levels, January to December 2008. Comparison of average rainfall with normal levels over 30 years. For Western Europe, normal rainfall levels are measured from 1971 to 2000, and for Eastern Europe from 1961 to 1990. Source: Météo France Weather database

Hydraulicity (3) was considered normal for the French hydropower plants. High water levels were observed in the Alps in late May, and the Massif Central in early November.

The year ended with heavy low-altitude snowfall over all the mountain ranges, leading to well above normal volumes of snow in the Pyrénées and the Alps for the early winter period (December).

In other European countries there was a considerable contrast between the situation in north and south Europe, with:

- very high rainfall in Scandinavia and the United Kingdom, but also in Spain;
- close-to-normal rainfall across the Alpine Arc;
- below-normal rainfall in Eastern Europe.

## 9.2.2 Significant events (4)

## 9.2.2.1 STRATEGIC DEVELOPMENTS

The Group pursues its strategy aiming at playing leader's role in the renewal of the nuclear in the world, at strengthening its European leadership and at developing the use of the renewable energies.

## 9.2.2.1.1 DEVELOPMENT OF NUCLEAR ACTIVITIES WORLDWIDE

#### - ACQUISITION OF BRITISH ENERGY BY EDF

EDF considers this acquisition as a crucial stage in the EDF group's development, with the following expectations:

- strengthen EDF's position as the worldwide leader in the New Nuclear Build programme through construction of four EPRs in the United Kingdom. The objective is to have the first of these EPRs come on line by the end
- combine use of the British Energy and EDF groups' nuclear expertise and knowhow in purpose of increasing EDF's total capacity;
- consolidate EDF's UK market positions by a better balance between generation and supply;
- generate, for the broader group, cost and revenue synergies.

The takeover of British Energy meets the EDF group's investment profitability and value creation criteria, and is consistent with its aim to be the energy operator with the lowest CO<sub>2</sub> emissions. The acquisition was recommended by British Energy's Board of Directors and supported by the UK government.

British Energy is the UK's largest electricity generator, and its leading nuclear power operator. It has eight nuclear power plants (seven AGRs (5) and one PWR (6) with total installed capacity of 10.6 GW, and one coal-fired plant at Eggborough with installed capacity of 2GW.

- 3 Hydraulicity is the ratio of annual water run-off compared to the interannual average.
- 4 Significant events related to litigation are described in chapter 20.5.
- 5 Advanced Gas cooled Reactor.
- 6 Pressurized Water Reactor

On September 24, 2008, EDF and British Energy announced that they had reached an agreement on the terms of the offer to be made by Lake Acquisitions Ltd ("Lake Acquisitions"), a wholly-owned subsidiary of EDF, for acquisition of the shares of British Energy.

On September 25, 2008, Lake Acquisitions announced that it had acquired 274,288,774 British Energy shares representing approximately 26.53% of the issued share capital of British Energy at that date.

On November 5, 2008, Lake Acquisitions submitted the terms of its recommended offers for the acquisition of all the shares issued and to be issued by British Energy, with the exception of the Special Share (a £1 preference share carrying special rights held jointly by Her Majesty's Secretary of State and the Scottish Secretary of State) and the ordinary British Energy shares already held by Lake Acquisitions.

Certain conditions applied to the transaction, particularly authorization by the European Commission under the regulations on business concentrations. On November 3, 2008, EDF notified the European Commission of the proposed acquisition via a form CO, and the Commission announced on December 22, 2008 that it approved the takeover of British Energy by Lake Acquisitions subject to execution of certain agreed commitments  $\ensuremath{^{(1)}}$  by EDF. These commitments will be fulfilled in the next few years.

On January 5, 2009, Lake Acquisitions declared its offers unconditional in all respects and announced that the acquisition was effective. The procedure for cancellation of British Energy ordinary shares on the Official List and cancellation of the admission to trading on the London Stock Exchange's Main Market was initiated the same day, and cancellation took effect from February 3, 2009.

On January 12, 2009, Lake Acquisitions announced that at January 8, 2009 it held or had received valid acceptances for 1,550,113,345 shares in British Energy (including the shares purchased on the market in late September 2008), representing 96.44% of the existing share capital of British Energy. As it had received acceptances for at least 90% (in value and voting rights) of the ordinary shares concerned by its acquisition offer, Lake Acquisitions exercised its right to launch a "squeeze out" offer for compulsory purchase of the outstanding British Energy shares, on the same terms as the offer.

## **Acquisition price**

The total acquisition price for British Energy as measured at January 5, 2009, including the 26.5% of shares purchased in September 2008, amounts to £11,998 million (after deduction of outstanding shares and purchasing expenses), the equivalent of €13,232 million (for details of the accounting treatment of the acquisition of British Energy, see note 4.1.3 to the consolidated financial statements for the fiscal year ended December 31, 2008).

The acquisition of British Energy was initially financed through EDF's cash resources and a syndicated bank loan of £11 billion subscribed on September 23, 2008, with two tranches of 1 year and 3 years, to be refinanced largely through the capital markets (see paragraph 9.13, "Subsequent events").

## 1 These conditions chiefly concern:

(i) a commitment to divest certain generation facilities owned by British Energy (the Eggborough coal-fired plant) between September 1, 2009 and March 31, 2010, and by EDF Energy (the gas-fired Sutton Bridge plant) by March 31, 2013, (ii) termination of one of the group's three electricity transmission agreements at Hinckley Point, (iii) sale of between 5 and 10 TWh of electricity on the market between 2012 and 2015, (iv) unconditional divestment by EDF of a site with potential for building and operating a new electricity generation facility adjacent to British Energy's existing nuclear plant at either Dungeness or Heysham, at the purchaser's choice.

## Consolidation of British Energy in the EDF group financial statements

As exclusive control of British Energy was transferred to EDF on January 5, 2009, the date at which the offers were declared entirely unconditional, British Energy will be fully consolidated in the EDF group's consolidated financial statements from January 2009.

#### **EPR** projects

The Group has confirmed its target of 2012 for the start of operation by the Flamanville EPR.

The adjusted cost in 2008 Euros of the EPR under construction in Flamanville was €4 billion, compared to the previous estimate of €3.3 billion (in 2005 Euros). Factors incorporated into the adjustment include inflation, the indexation effects of certain contracts in view of rising commodity prices, and the impact of changes in techniques and regulations. The adjusted full cost of electricity generated at the plant thus amounts to €54/MWh in 2008 Euros.

Assuming currently foreseeable forward Brent prices, EDF continues to consider that the EPR is competitive in the long term compared to other types of generation facilities whose full costs have seen higher increases over the same period. Current estimates set generation costs for a new plant at a minimum of €68/MWh for a combined-cycle gas plant and €70/MWh for a coal-fired plant, based on the lowest assumptions regarding commodity and CO<sub>2</sub> costs.

#### - DEVELOPMENT OF NUCLEAR ACTIVITIES OUTSIDE FRANCE

#### **United States**

In the United States, EDF's priority is the development of EPR-type nuclear power plants via Unistar Nuclear Energy, a joint venture with Constellation Energy Group (CEG), and acquisition of existing nuclear assets. The first new plant is due to come on line in 2016.

The COLA (Combined License Application for plant construction and operations) for the proposed Calvert Cliff 3 and Nine Mile Point 3 plants is currently under examination by the NRC (2). Negotiations have also begun with the Department of Energy (DoE) for federal financing guarantees, which could be supplemented by COFACE credit.

EDF and CEG announced on December 17, 2008 that they had reached an agreement, under which EDF would acquire a 49.99% interest in Constellation Energy Nuclear Group (CENG) through a joint venture, for \$4.5 billion. Under the terms of this agreement, EDF made an immediate \$1 billion cash investment in CEG to be credited against the purchase price upon completion of the operation, and CEG has a put option to sell up to \$2 billion of certain non-nuclear generation plants to EDF. The agreement requires approval of US authorities, which is likely to be issued in six to nine months.

2 Nuclear Regulatory Commission: the US nuclear safety authority.

## Operating and Financial Review

Under the same agreement, EDF has also granted a \$600 million interim backstop borrowing facility to CEG until the regulatory authorizations are received for transfer of these non-nuclear assets, or at the latest six months from the date of execution of the agreement with EDF.

Following the purchases of CEG shares on the market by EDF and the conversion by MidAmerican of some of its preferred stock, EDF's investment in CEG stood at 8.52% at December 31, 2008.

#### China

On August 10, 2008, EDF and the Chinese electricity producer China Guangdong Nuclear Power Holding Company (CGNPC) signed an agreement to set up a joint venture called Guangdong Taishan Nuclear Power Joint Venture Company Limited (TSNPC). The purpose of the joint venture is to construct and operate two nuclear power plants using EPR technology at Taishan in the province of Guangdong, modeled on the EPR reactor currently under construction by EDF at Flamanville in Normandy. The two plants are scheduled to come on line in 2013 and 2015. The creation of this joint venture is awaiting the approval of the Chinese authorities.

EDF plans to hold 30% in TSNPC. The operation will be the EDF group's first investment in nuclear electricity generation in China.

#### **South African Republic**

In December 2008, after a consultation involving EDF on a project for a 3,500 MW nuclear plant, the South African national electricity operator Eskom declared the bid unsuccessful and has decided to suspend this project for the time being, in view of the scale of the investment and the current economic situation, but did not cancel the program as a whole. South Africa has announced that it is still interested in developing nuclear power.

Italy announced in late 2008 that it intended to launch a nuclear program with a target commissioning date of 2013 for the first units. The Italian authorities have asked for cooperation from France, and the EDF group intends to respond positively to this approach by the Italian government.

## **EDF-Areva** AGREEMENT FOR MANAGEMENT OF SPENT NUCLEAR FUEL

On December 19, 2008, EDF and Areva signed a long-term framework agreement for industrial cooperation (2040), concerning removal of all EDF's spent fuel, the technical and financial conditions of transportation, processing and recycling of the spent fuel (2008-2012), and the amount of the payment for dismantling of the plant at La Hague in north-west France.

The agreement clarifies the principles for future cooperation between EDF and Areva based on two reciprocal commitments:

- Areva will operate the La Hague plant and the Melox plant at Marcoule in the south of France until 2040, with the aim of continuous improvement in the industrial and economic performance for the benefit of EDF;
- EDF will use these facilities until 2040 and during that time will rely on Areva for transportation of spent fuel.

The agreement is a continuation of the longstanding ties between the two companies, which have been based on the following arrangements since EDF's first nuclear power plants were commissioned:

• collection and transportation by Areva of spent fuel from EDF power plants to the La Hague plant;

- separation of recyclable fuel material from final residues at La Hague and supply of MOX fuel to the Melox plant;
- conditioning and minimizing the volumes of final residues, by vitrifying high-level waste or compacting long-life medium-level waste, for safe interim storage in dedicated installations at La Hague.

The payment to be made by EDF to Areva for recovery and conditioning of old waste, final shutdown, and dismantling costs for the La Hague plant is fixed in the industrial cooperation agreement of December 19, 2008 at €2.3 billion, based on the economic conditions of December 31, 2007. The amount of the provision for EDF's contribution was reversed and recognized as an operating liability of €1.68 billion, after deduction of the advances EDF has already paid to Areva.

The two Groups have undertaken to negotiate the terms of a final contract under this framework agreement by December 31, 2009, particularly concerning the practical conditions for settlement of the liability.

## 9.2.2.1.2 STRENGTHENING AND EXPANDING EDF'S EUROPEAN LEADERSHIP

EDF is continuing to consolidate its positions in Europe through its operating investment program. The Group is attentive to external growth opportunities that meet its three criteria of strategic coherence, financial profitability, and acceptability in the countries concerned.

#### 9.2.2.1.2.1 British Energy

The most significant investment of the year was the acquisition by EDF of British Energy. Control was transferred on January 5, 2009 (see "Acquisition of British Energy" above in section 9.2.2.1.1 "Development of nuclear activities worldwide").

## 9.2.2.1.2.2 Creation of a new Swiss energy leader

Under the terms of agreements signed on December 18, 2008, EDF will hold a 25% share in the new Swiss energy operator Alpiq Holding SA by January 31, 2009.

Alpiq Holding SA, which has begun trading on February 1, 2009, was formed by a merger between Swiss energy companies Atel and EOS. The two companies' combined sales revenues for 2007 were in excess of CHF 16 billion (€10.7 billion<sup>(1)</sup>) and they produce one third of Switzerland's electricity supply.

By combining forces, Atel and EOS will form a Swiss operator on a European scale, with a generation capacity in Switzerland of approximately 3,000 MW for hydropower and 765 MW for nuclear power.

The total cost of the operation for EDF is CHF 1,057 million (approximately €705 million<sup>(1)</sup>). To finance it, EDF will contribute to Alpiq Holding SA the energy rights deriving from its 50% holding in the Emosson dam on the French-Swiss border, valued at CHF 720 million (approximately €480 million<sup>(1)</sup>). The balance of CHF 337 million (approximately €225 million<sup>(1)</sup>) will be paid in a cash contribution.

1 Based on the exchange rate of €1=CHF1.5.

#### 9.2.2.1.2.3 GERMANY

## "Supercritical" coal-fired power plant

Work on the Karlsruhe RDK8 coal-fired plant began in early 2008 and the project is progressing on schedule. The plant is to come on line in late 2011.

#### Neckarwestheim nuclear plant

In June 2008, Germany's Federal Environment Minister rejected EnBW's application of December 21, 2006 to transfer part of the Neckarwestheim II plant's electricity generation volume to the Neckarwestheim I plant. EnBW is challenging the decision.

EnBW has also confirmed that the quantities remaining to be generated at the Neckarwestheim I nuclear plant will mean the reactor remains connected to the national network until early 2010, in compliance with

## Cooperation between EWE and EnBW for development of renewable energies and international business

On July 10, 2008, EnBW announced that it was to acquire a 26% stake in EWE AG. EnBW and EWE stated in the agreement governing the transaction that they would develop renewable energies and international business jointly. In particular, they intend to work together on development of new wind farms, and natural gas storage activities.

EWE has approximately 4,700 employees and registered consolidated sales of €4.7 billion in 2007.

In response to the growing difficulties in obtaining access to electricity generation and natural gas capacities, EWE intends to expand its own energy generation capacities with the support of EnBW. EnBW's total investment will amount to approximately €2 billion.

The purchase of the 26% investment in EWE by EnBW should be mostly self-financed. The transaction is currently under examination by the German competition authorities (Bundeskartellamt).

## 9.2.2.1.2.4 ITALY

## Edison-Hellenic Petroleum partnership

Edison and Hellenic Petroleum, Greece's largest hydrocarbon company, signed agreements on July 3, 2008 for creation of a joint venture to operate in Greece's electricity market.

The objective of this 50-50 joint venture is to develop a generation capacity of more than 1,500 MW using CCGTs(1), to reach a level of output equal to approximately 12% of the Greek market and thus become the second largest electric power operator in Greece. A 390 MW CCGT is already in operation, and a second with capacity of 400 MW is in development.

## 9.2.2.1.2.5 DEVELOPMENTS IN THE NATURAL GAS BUSINESS

To support expansion in its natural gas activities, the EDF group aims to secure supplies by ongoing development of a diversified, safe and flexible portfolio of physical and contractual assets both for procurement of natural gas (purchase contracts, reserves) and logistical capacities (gas pipelines, LNG chain, storage).

1 Combined Cycle Gas Turbine (CCGT).

#### **Development of supplies**

On February 13, 2008, EDF entered into an agreement with the Spanish group Gas Natural for supplies of liquefied natural gas (LNG). The agreement covers a total volume equivalent to 4 billion m<sup>3</sup>, to be delivered from April 2009 at a rate of 1 billion m<sup>3</sup> each year, potentially contributing to supplies for the French market.

EDF also undertook its first acquisition of gas generation assets on October 28, 2008, when it signed an agreement with ATP Oil & Gas UK, a subsidiary of the US oil company ATP Oil & Gas Corporation (ATPG), to purchase 80% of its holdings in North Sea gas facilities. The total volume of reserves is estimated at 3 billion m<sup>3</sup>. The cost of the transaction is £260 million (approximately €325 million) and it was completed in December 2008 with transfer of ownership on December 18, 2008.

#### Infrastructure projects

Following the open debate of autumn 2007, EDF confirmed in July 2008 that it was continuing feasibility studies begun in 2006 for the construction of a methane terminal at the port of **Dunkirk**. The scope of the onshore facilities was redefined in order to minimize the impact on the ecosystem and protect local flora and fauna.

On September 20, 2008 the Rovigo offshore methane terminal (Italy) was inaugurated. Edison will have access to 80% of the terminal's capacity once it begins operations in 2009.

Edison also announced in December 2008 that it had acquired the concession for exploration, production and development for the Abu Qir oil and gas field in Egypt. This will involve a total investment of approximately €1.7 billion in the coming five years. The Abu Qir field produces some 1.5 Gm<sup>3</sup> of natural gas and 1.5 million barrels of oil each year, and has reserves of approximately 70 Gm3 of natural gas, 40% of which will go to Edison.

## **Acquisition of Eagle Energy**

On September 29, EDF Trading signed an agreement for acquisition of Eagle Energy Partners from Lehman Brothers for \$230 million.

Eagle Energy Partners operates in the US, specializing in natural gas transmission and storage services, and asset optimization services on the wholesale gas and electricity markets.

## Partnerships with gas producers

EDF signed a cooperation agreement in January 2008 with the Government of Qatar to examine natural gas partnerships and provide support in Qatar's discussions on nuclear power generation and renewable energies.

### 9.2.2.1.3 REINFORCING RENEWABLE ENERGIES

In centralized generation, the Group has continued development through its subsidiary EDF Énergies Nouvelles, which expects to increase installed capacities for renewable energies, either independently or in conjunction with partners, to, at least, 3,000 MW by 2011 and 4,000 MW by 2012, principally in windpower, but including 500 MWp (2) of photovoltaic solar power by 2012.

2 MWp: Megawatt-peak: Measurement unit for the power of a photovoltaic installation per unit of time.

## Operating and Financial Review

#### - EDF ÉNERGIES NOUVELLES

To finance its development in the field of photovoltaic solar power, EDF Énergies Nouvelles successfully undertook a €500 million capital increase in September 2008. The funds raised will finance construction of power plants using ground-mounted or roof-mounted systems, and development of EDF Énergies Nouvelles Réparties, the 50-50 joint venture set up with EDF in February 2008 and consolidated in the financial statements of EDF Énergies Nouvelles.

EDF Énergies Nouvelles continued to secure supplies of solar panels during 2008, signing a further 75 MWp agreement with First Solar bringing the total volume of panels ordered from that company to 325 MWp for the period 2009-2012. The Group has also signed a contract with the US company Nanosolar granting access to some of its output from 2009, and acquired an investment in Nanosolar through its subsidiary EDF Énergies Nouvelles Réparties. In all, excluding Nanosolar, the Group has thus secured firm supplies of 431 MWp and optional supplementary supplies of 40 MWp for the period 2009-2012.

In the field of windpower, 813 MW of EDF Énergies Nouvelles wind generation capacity came on line during 2008, principally in Portuguese wind farms at Ventominho (240 MW) and the first two units at Arada (92 MW), in France with three newly commissioned wind farms generating a total of 190 MW, and in the USA at the Wapsipinicon wind farm (100.5 MW).

In photovoltaic solar power, 19.9 MWp gross capacity came on line for EDF Énergies Nouvelles during 2008, including 7 MWp gross at Narbonne in the south of France.

At December 31, 2008, the Group's total installed capacity was 2,275 MW (gross) in operation and 920 MW (gross) under construction. The Group has also signed Structured Asset Development and Sale contracts for more than 500 MW with US electricity operators, for facilities due to be completed between 2009 and 2011.

Through its US subsidiary EnXco, EDF Énergies Nouvelles also entered into new operation and maintenance contracts covering total capacity of 2,139 MW. EnXco now manages more than 5,200 wind turbines on its own behalf and for other companies.

In Canada, Hydro Quebec selected the St-Laurent Énergies consortium, in which EDF Énergies Nouvelles holds a 60% share, as constructor for five wind farms with total capacity of 954 MW. In Belgium, the first section of the C-Power offshore project (30 MW of the total 300 MW) is under construction, and the first six turbines have been installed at sea.

In the United Kingdom, EDF Énergies Nouvelles and EDF Energy also entered into an agreement in June 2008 to form a new joint venture, EDF Energy Renewables.

Continuing its international development, EDF Énergies Nouvelles took a position in Turkey through a 50% investment in Polat Enerji, one of the leading Turkish wind farm developers.

#### - EnBW

In May 2008, EnBW acquired two development companies for offshore wind farm projects in the North Sea and the Baltic Sea. A total 1,200 MW capacity will be constructed over the next five years.

- 1 Availability coefficient (Kd: available energy as a percentage of the theoretical maximum energy, i.e. corresponding to operation at full installed capacity all year round).
- 2 Accelerated assembly technique originally introduced for units 1 and 2 at Civaux.

#### 9.2.2.2 BUSINESS IN FRANCE

### 9.2.2.1 PERFORMANCE OF NUCLEAR POWER PLANTS

#### - NUCLEAR GENERATION

Nuclear generation produced 418 TWh in 2008, practically stable from 2007. This stability reflected a Kd (availability coefficient <sup>(1)</sup>) of 79.2%, down by 1 point from 2007, and a Ku (utilization coefficient) of 95.2%, up 1 point from 2007.

The main factors affecting the nuclear generation levels in 2008 resulted from two faults common to several units, whose effects run across

- the continuation of cleaning for clogged steam generators;
- more frequent problems with certain alternator stators (particularly on 1,300 MW units).

The clogging of steam generators reduced the availability coefficient (1) for 2008 by approximately 2 points. The phenomenon was first observed in autumn 2006 at the Cruas plant, and the scale of the problem was estimated through a review carried out by EDF in 2007: it affected 15 of the 58 units in the French fleet (eight 1,300 MW units and seven 900 MW units). A chemical cleaning treatment is required for the steam generators concerned. By the end of 2008, the steam generators had been cleaned at 9 units (4 in 2007 and 5 in 2008) and the remaining 6 units are scheduled for cleaning in the coming 2-3 years.

The higher frequency of problems with certain alternator stators reduced the availability coefficient for 2008 by approximately 1.6 point.

Of the 58 units, 48 show a risk of loss of insulation on alternator stators due to a design weakness. A renovation program using a new STAR (2) technology began in 2005, consisting of rewinding the stator on-site or replacing it. By the end of 2008 13 alternators had been renovated and the program continues, covering a maximum of 5 stators each year (full rewinding or replacement). 35 of the 48 alternator stators concerned should be renovated by the end of 2012.

Availability was also affected by a 0.5 point impact of damage to transformers.

EDF aims to reach an availability coefficient of 85% by 2011, with an average increase of 2 points per year, to be achieved through the "Excellence Opérationnelle" program and progressive elimination of the defaults observed with steam generators, alternators and transformers.

### - EXTENSION OF THE USEFUL LIFE OF PLANTS

EDF aims to extend the useful life of its fleet significantly above 40 years, in keeping with the observed international trend for comparable technology plants (in the US, Japan, Sweden, Switzerland, etc.). Studies by EDF have shown that a 40-year useful life is technically feasible for existing units, but EDF cannot predict whether authorizations would be given for each individual plant by the Nuclear Safety Authority ("ASN").

EDF has already begun industrial action plans and research and development plans with the aim of extending the useful life of nuclear plants significantly beyond 40 years, through appropriate measures in response to obsolescence of certain components (particularly reactor vessels and confinement enclosures which are considered non-replaceable, and renewal of certain major facilities). These plans are expected to require long-term investment of some €400 million per unit.

#### 9.2.2.2 MARKET DEVELOPMENTS

#### - TENDERS FOR FLECTRICITY SALES:

## 1,000 MW OF ELECTRICITY SOLD TO ALTERNATIVE SUPPLIERS

In a ruling of December 10, 2007, the French competition authorities (Conseil de la concurrence) accepted and made binding EDF's proposed commitment to tender a significant volume of electricity to alternative

The first auction took place on March 12, 2008. Twelve companies submitted bids, and the 500 MW put up for tender by EDF were awarded to 5 companies.

A second auction was undertaken on November 19, 2008; ten companies submitted bids and seven were awarded the 500 MW tendered. These tenders concern baseload supply contracts for periods of up to fifteen years.

#### - PARTNERSHIP WITH EXELTIUM

EDF and Exeltium (a consortium of large electricity-intensive industrial customers) entered into an industrial partnership agreement on July 31, 2008 to make energy supplies more secure for Exeltium in the long term. This agreement covers volumes of some 310 TWh spread over 24 years, enabling EDF to optimize operating conditions for its generation fleet.

It was finalized after in-depth discussions with the European Commission, which required adjustments to the original agreement for compliance with competition law.

The first deliveries of electricity are due to take place as soon as Exeltium has the necessary financing in place.

## 9.2.2.3 REGULATORY ENVIRONMENT (FRANCE)

#### HYDROPOWER CONCESSIONS

Article 7 of the French Law of December 30, 2006 on water and aquatic environments removed the outgoing operator's preferential right instituted by the law of October 16, 1919 on the use of hydropower.

Article 33 of the Law of December 30, 2006, amending the 2006 finance law, sets out the principle of an indemnity for the outgoing operator in respect of the unamortized portion of investments made during the second half of the agreement, with the exception of investments required to return the assets in good condition at the end of the concession.

The implementation decree was published on September 26, 2008. It clarified the terms of indemnification for work carried out during the second half of the concession prior to publication of the decree. The operator has 4 months from publication of the decree to submit a statement of the relevant expenses to the ministry for approval, in order to receive indemnification at the end of the concession.

Once the claim has been approved by the administration during the first half-year of 2009, EDF will apply the necessary adjustments to the accounts, principally through accelerated depreciation over the residual term of the agreement of the net book value of assets to be transferred for nil consideration when the concession expires. These adjustments should not have a significant impact on the financial statements.

## FRENCH LAWS ON URBAN SOLIDARITY AND RENEWAL -TOWN PLANNING AND HABITAT

The implementation provisions for the sections of the French solidarity and urban renewal law (SRU - Solidarité Renouvellement Urbains) and town planning and habitat law (UH - Urbanisme et Habitat) concerning connection to the public electricity distribution network introduce a new system, with the following main features:

- definition of connection operations, separating network extension from network connection, with clear identification of the beneficiaries (local authorities in charge of town planning and connected customers);
- establishment of a single price scale for all connection operations;
- direct inclusion of part of the connection price in the delivery tariff, using reduction rates applicable to the basic price scale.

A price scale was proposed to, and approved by, the French energy regulator (CRE - Commission de Régulation de l'Énergie).

These new rules were set out in the decision published on November 20, 2008, to take effect from January 1, 2009.

Contributions received in execution of this decision will be treated as sales.

## THIRD EU "ENERGY" DIRECTIVE

On September 19, 2007, the European Commission proposed a third "energy" directive, containing the following measures to accelerate deregulation of the European energy market:

- unbundling of the assets of transmission network operators; in certain cases, the State could remain the owner of those assets but would then have to designate a transmission network operator (the "ISO" (Independent System Operator)" system);
- · reinforcement of regulatory powers;
- closer coordination between transmission network operators;
- greater transparency in network management and market operation.

In the first quarter of the 2008, eight EU Member States including France and Germany took the view that unbundling the transmission network assets was not necessary for a more open market, and proposed a third way based on three main principles: improving the governance of vertically integrated companies and their relations with transmission network operator subsidiaries, development of the networks (development plan, investment control), and regional cooperation.

## Operating and Financial Review

At the EU Energy Council held on June 6, 2008, European energy ministers reached broad agreement over the general orientations. On the issue of separating the transmission network operator's activities from generation and supply activities, the idea of a third way, called the "ITO (Independent Transmission Operator) option", was accepted to guarantee the independence of the transmission network operator while preserving the financial interests of vertically integrated companies.

On October 10, 2008, the EU Energy Council adopted a new draft law intended to:

- encourage regional cooperation;
- lay down the principle of unbundling for the transmission network operators, but leaving member states the option of using the ISO or ITO system;
- reinforce the powers of the regulatory authorities, particularly concerning oversight of investments by the transmission network operators.

These proposals were due to be sent in January 2009 to the European Parliament, which then has three months to determine its position.

#### 9.2.2.4 GOVERNANCE

## APPOINTMENT OF MR BRUNO LAFONT TO THE BOARD **OF DIRECTORS**

The Shareholders' Meeting of May 20, 2008 took note of Mr Louis Schweitzer's resignation from his position as director, and appointed Mr Bruno Lafont (1) as a director of the EDF group until November 22, 2009.

## APPOINTMENT OF MR DOMINIQUE LAGARDE TO REPLACE MR YANN LAROCHE, AS CHIEF OFFICER

Mr Dominique Lagarde was appointed Chief Human Resources and Communications Officer with effect from May 20, 2008, replacing Mr Yann Laroche

Mr Yann Laroche did not wish to renew his term of office but remains Chairman of the Supervisory Board of ERDF, the EDF subsidiary in charge of distribution activities. He also acts as special advisor to the Chairman of FDF

## 9.2.2.5 FINANCING

To support the increasingly centralized financing of subsidiaries and provide financing for the Group's investment program, the EDF group undertook large-scale bond issue programs during 2008:

- a €1.5 billion bond issue in January 2008, with maturity of 10 years;
- a €1.8 billion bond issue in May 2008, with maturities of 6 to 12 years;
- a £0.5 billion (€0.6 billion) bond issue in May 2008, with maturity
- a 40 billion yen (€0.2 billion) issue in July 2008, with maturity of 5 years;
- a €2 billion issue in November 2008, with maturity of 4 years and 2 months;
- a £0.4 billion (€0.5 billion) bond issue in December 2008, with maturity
- a CHF1.35 billion (€0.9 billion) bond issue on the Swiss market in November and December 2008, with maturity of 5 years.

RTE EDF Transport also issued bonds in May and August 2008 totaling €1.25 billion and €1 billion and with maturity of 7 and 10 years respectively, in order to refinance part of its debt.

1 Mr Bruno Lafont (born in 1956) is a graduate of Paris business school HEC (1977) and France's top school for senior civil servants École Nationale d'Administration (1982). He joined the Lafarge group in 1983 and has been its Chairman and CEO since May 2007.

To finance its investment program, EnBW undertook two bond issues in November 2008 through a European banking syndicate for a total of €1.5 billion and maturity of 5 and 10 years.

Other issues were undertaken in early 2009, as described in section 9.13, "Subsequent events".

These issues are part of the Group's policy to increase the average duration of its debt

#### 9.2.2.6 HUMAN RESOURCES

## PUBLICATION OF THE DECREE ON REFORM OF THE SPECIAL ELECTRICITY AND GAS SECTOR (IEG) PENSION SYSTEM IN FRANCE AND RELATED SUPPORT MEASURES

The main provisions of this decree, published on January 22, 2008, concern:

- · prolongation of the employee contribution period;
- reductions and increases in pension rates.

The decree came into force on July 1, 2008.

An agreement was signed for the IEG sector on January 29, 2008 as part of this reform, following the principles set forth in the French Pension Guideline Document. This agreement introduces the following main support measures for the changes:

- measures concerning employees salaries;
- initial measures related to longer working lives.

Sector-specific agreements were also signed in 2008 for improved social security coverage (additional pensions, welfare protection). Negotiations on the question of how the system will take into consideration the specificities of different businesses are expected to continue throughout the first half-year of 2009.

The sector's complementary welfare arrangements (life insurance, education benefits) therefore take effect from January 1, 2009, as does the additional pension scheme introduced by the EDF group in application of the sector-specific agreement of February 21, 2008.

## AMENDMENT OF THE IEG STATUTES

On June 29, 2008, France's Official Gazette (Journal Official) published the decree amending the IEG statutes concerning the special pension system. This decree takes effect from July 1, 2008 and sets out all the rules applicable to pensions and invalidity benefits for IEG sector employees. In addition to extending the contribution period to qualify for a full pension, and introducing reductions and increases applicable to pension rates, it also contains new measures primarily concerning family and conjugal benefits, and defines the timeline for progressive application of the new rules.

A new decree introducing a range of modifications to the statutes (limits on age and the conditions for retirement age to be set by the employer, unpaid leave entitlement to look after a child under eight, seniority clause to qualify for various benefits during retirement) was published in the Official Gazette of July 4, 2008. This decree also removed age and nationalitybased restrictions on hiring.

On October 22, the decree formally removing automatic retirement imposed on employees, a measure dating from 1954, was also published in the French Official Gazette.

#### - 2008-2010 PROFIT SHARING

EDF's 2008-2010 voluntary profit sharing agreement was signed on June 13, 2008. It aims to provide a collective performance incentive for the company's employees in each area of activity, and is based on three criteria: the company, the area of activity, and the unit.

### - "EMPLOYEE OFFERING"

On December 3, 2007, the State sold 2.5% of EDF's capital to French and international institutional investors.

Pursuant to article 11 of the law of August 6, 1986 and article 26 of the law of August 9, 2004, following this sale by the State, the company made a preferential offer to current and retired employees of EDF and certain French and foreign subsidiaries, from September 12 to September 22, 2008.

70,000 employees subscribed 3.2 million shares. Employees' shareholding in EDF rose from 1.9% to 2.01%.

## 9.2.3 Changes in the scope of consolidation

The main changes in the scope of consolidation during 2008 are described below:

- Italy
  - sale by Edison in April 2008 of seven thermoelectric plants;

- sale on May 1, 2008 of 51% of Dolomiti Edison Energy, owner of three hydropower plants in the Trento province, and on October 24, 2008 of 60% of Hydros, owner of 7 hydropower plants in Bolzano province. Both these companies remain fully consolidated by Edison;
- incorporation of Edison Engineering SA, which is constructing a combined cycle gas plant at Thisvi in Greece.
- Rest of Europe
  - sale of Soprolif completed in February 2008;
  - purchase by EDF of shares in ECW (Poland) for €54 million after GDF Suez exercised its put option, raising the EDF group's shareholding from 77.52% to 99.66%;
  - various external growth operations carried out by Dalkia International, including the acquisition of the Praterm Group in Poland;
  - increase in EDF Énergies Nouvelles' investment in Fotosolar (from 45.83% to 90%);
  - sale in December 2008 of Clemessy, a company owned by Dalkia Holding, generating a gain of €184 million. The EDF group's share amounts to €63 million and is reported under "Investments in companies accounted for under the equity method";
  - acquisition in October 2008 of 100% of Eagle Energy Partners by EDF Trading for \$230 million (€181 million). The net assets acquired, after fair value adjustments, amount to \$238 million (€184 million). Eagle Energy Partners is a US-based company specialized in energy logistics and asset optimization services;
  - acquisition on December 18, 2008 by EDF Production UK, a whollyowned subsidiary of EDF, of 80% of the investments held by ATP Oil and Gas UK in three North Sea gasfields for £260 million;
- additional investment in the capital of EDF Investissement Groupe through a €1,806 million contribution in December 2008 to a capital increase reserved for C3 (a wholly-owned subsidiary of EDF), raising the Group's percentage holding from 66.67% to 84.85%.

# 9.3

# Introduction to the 2008 results analysis

# 9.3.1 Declaration of conformity and Group accounting policies

Pursuant to European regulation 1606/2002 of July 19, 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended December 31, 2008 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at December 31, 2008. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and interpretations issued by the SIC and IFRIC.

The consolidated financial statements for 2008 contain comparative information for the financial year 2007 prepared under the same accounting standards

# 9.3.2 Changes in accounting methods at January 1, 2008

The accounting and valuation methods applied by the Group in the consolidated financial statements for the year ended December 31, 2008 are identical to those used in the consolidated financial statements for the year ended December 31, 2007.

Two new standards were endorsed by the European Union for application

- IFRIC 11, "IFRS 2: Group and Treasury Share Transactions", already applied by the Group since 2007;
- amendments to IAS 39 and IFRS 7 on "Reclassification of financial assets", endorsed by the European Union on October 16, 2008 with application possible from July 1, 2008, which does not apply to EDF and therefore has no impact on the Group's financial statements.

## Operating and Financial Review

The Group has not opted for early application of the following standards endorsed by the European Union in 2007 and 2008 but not yet mandatory in 2008:

- revised IAS 1, "Presentation of financial statements";
- IFRS 8, "Operating segments". This standard, which will replace IAS 14, requires the entity's financial performance and operating segments to be presented in the form in which they are regularly reviewed by management;
- amendment to IAS 23, "Borrowing costs", which removes the option allowing immediate expensing of borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset, and therefore requires such costs to be capitalized as part of the costs of that asset;
- amendment to IFRS 2 "Vesting Conditions and Cancellations";
- IFRIC 13, "Customer Loyalty Programmes";
- IFRIC 14, "IAS 19 The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction".

These standards, amendments and interpretations will be mandatory from January 1, 2009. Their potential impact is currently being evaluated.

The Group has also decided against early application of the following standards and interpretations, which are expected to be endorsed by the European Union in 2009:

- revised IFRS 1, "First-time Adoption of International Financial Reporting
- amendment to revised IAS 27, "Consolidated and Separate Financial Statements";
- amendments to IAS 32 and IAS 1 entitled "Puttable financial instruments and obligations arising on liquidation";
- revised IFRS 3, "Business combinations";
- amendments to IFRS 1 and IAS 27, "Cost of an investment in a subsidiary, jointly controlled entity or associate";
- amendments to IAS 39 "Financial instruments: recognition and measurement - Eligible hedged items";
- IFRIC 12, "Service Concession Arrangements" (discussed in note 2.12.1 to the consolidated financial statements at December 31, 2008);
- IFRIC 15, "Agreements for the Construction of Real Estate";
- IFRIC 16, "Hedges of a Net Investment in a Foreign Operation";
- IFRIC 17, "Distributions of Non-cash Assets to Owners";
- IFRIC 18, "Transfers of Assets from Customers".

The potential impact of all of these standards, amendments and interpretations is currently being evaluated.

# 9.4

## **Results for 2008**

## **9.4.1 Sales**

#### ▶ 10.6% ORGANIC GROWTH IN CONSOLIDATED SALES

EDF group's consolidated sales totaled €64,279 millions in 2008, a rise of 7.8% from 2007 reflecting organic growth <sup>(1)</sup> of 10.6%. The 7.8% increase includes negative foreign change effects of -€1,182 million (-2.0%), mostly associated with the fall in the pound sterling against the Euro.

Changes in the scope of consolidation had a negative effect of -€480 million, i.e. -0.8%, resulting mainly from the sale of EDF assets in Mexico in 2007.

In France, 2008 sales were 6.3% higher than in 2007, due to positive volume effects (weather and hydropower output), and price effects (tariffs and electricity sale prices on the wholesale markets), and growth in natural gas sales.

The Group made 53.3% of its consolidated sales for 2008 in France compared to 54.0% in 2007.

In Europe excluding France (the United Kingdom, Germany, Italy and Rest of Europe segments), sales grew by 12.5% (organic growth of 16.2%). This growth resulted from price effects as price rises for energy and commodities were partially passed on to customers.

1 Organic growth is growth that does not incorporate the positive or negative effects of changes in the scope of consolidation (acquisitions or disposals of subsidiaries), or in exchange rates or accounting methods.

This increase was particularly strong in Italy (+30.7%), notably due to rising electricity prices, but also in the rest of Europe (+22.7%) which saw considerable development in the central European countries, and at the subsidiaries EDF Trading, EDF Énergies Nouvelles, and Dalkia.

There was strong growth in Germany (+8.2%) in both electricity and gas businesses. Sales were down by 1.3% in the United Kingdom due to the falling pound sterling. Excluding foreign exchange effects and changes in the scope of consolidation, sales for the United Kingdom showed growth of +13.3%.

Sales by the Europe excluding France segment accounted for 45.7% of total consolidated sales in 2008 compared to 43.8% in 2007.

## **9.4.2 EBITDA**

▶ 3.7% ORGANIC GROWTH IN EBITDA, BEFORE THE PROVISION RESULTING FROM EXTENSION OF THE TRANSITION TARIFF SYSTEM (TaRTAM) (€1,195 MILLION).

Consolidated EBITDA for 2008 was €14,240 million, down by 6.4% (-€970 million) from 2007, mainly due to the provision reflecting the impacts of extension of the transition tariff system (TaRTAM).

Foreign exchange effects (-€190 million or -1.2%) primarily result from the fall in the pound sterling against the Euro.

Changes in the scope of consolidation had an impact of -€143 million (-0.9%) and mainly concerned the sale of Mexican assets.

In France, EBITDA declined (1) by 9.8% as a result of the provision associated with prolongation of the transition tariff system (TaRTAM). Without the effect of that provision EBITDA would show a 2.2% increase.

Favorable price and volume effects were counterbalanced by the rise in net purchase obligations in connection with the Contribution to the Public Electricity Service (Contribution au service public de l'électricité or CSPE), the cost of energy purchases, maintenance costs and the support measures for the pension system reform.

In Europe excluding France, EBITDA increased by 2.7%, with organic growth at 6.9%

The impacts of IAS 39 on valuation of hedging contracts were particularly unfavorable in the United Kingdom (strong negative impact of €287 million in 2008 after a positive €151 million effect in 2007).

EBITDA in the United Kingdom registered an organic decline of 11.9%. Excluding the impact of IAS 39, it showed organic growth of 23.3% reflecting the good operational performances by EDF Energy in 2008.

The overall organic growth was mainly driven by Germany (10.1% organic growth) and by the Rest of Europe (21.9% organic growth), particularly EDF Trading.

Europe excluding France contributed 35.2% of Group EBITDA in 2008, compared to 32.1% in 2007.

In the Rest of the World, EBITDA was stable after adjustment for foreign exchange effects and changes in the scope of consolidation.

## 9.4.3 EBIT

EBIT totaled €7,911 million for 2008, a decrease of 20.8% from 2007 (€9,991 million).

This change essentially reflects the decline in EBITDA, and recognition of non recurring income in 2007 under the heading "Other income and expenses": €555 million for the impact of the extended useful life for substation buildings and electronic metering equipment, together with a fall in their replacement costs, and €425 million for gains on the disposal of business assets in Mexico and Argentina, which had no equivalent in 2008

Excluding non-recurring items in 2008 (-€1,260 million) and 2007 (€900 million), EBIT rose by 0.9% (3% with constant foreign exchange rates and scope of consolidation).

## 9.4.4 Group net income

2008 Group net income totaled €3,400 million compared to €5,618 million in 2007.

This change mainly results from the lower income before taxes of consolidated companies (-€2,713 million) despite an increase in the share in income of companies accounted for by the equity method (+€184 million) and a €280 million reduction in income taxes.

## 9.4.5 Net income excluding non-recurring items (2)

The net income excluding non-recurring items was €4,308 million in 2008, down by €369 million or -7.9% from 2007.

Excluding the impact of application of IAS 39, it amounted to €4,635 million, corresponding to organic growth of 5.0% from 2007.

## 9.4.6 Net indebtedness (3)

Net indebtedness rose by €8,207 million to €24,476 million at December 31, 2008, from €16,269 million at December 31, 2007.

- 1 In France, the nominal change is identical to the organic change.
- 2 Group net income excluding non-recurring items.

Non-recurring items, net of taxes, in 2008: -€908 million: prolongation of the TaRTAM transition tariff system -€783 million; Pensions in France: +€23 million; Gains on assets disposals by Dalkia: +€59 million; Net impairment on several items: -€210 million; Other items: +€3 million.

Non-recurring items, net of taxes, in 2007: +€941 million: impact of the change in useful life of substation buildings and electronic metering equipment, and effect of the reduction in renewal costs for this metering equipment: €338 million; capital gains on disposals of assets in Latin America: +€487 million (+€376 million on sales of activities in Mexico and +€111 million on sale of the 25% residual investment in Edenor); reduction in German income tax rates (+€304 million); impairment of -€124 million, mainly related to the lower transmission fees in Germany;-€64 million for recognition of risks on investments and other items.

3 Net indebtedness comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets comprising funds and interest rate instruments with initial maturity of over three months, that are readily convertible into cash regardless of their maturity and are managed according to a liquidity-oriented policy.

# 9.5

## Principal accounting methods sensitive to the use of estimates and judgments

The following accounting methods have been applied consistently through all the periods presented in the consolidated financial statements.

## 9.5.1 Valuation

The consolidated financial statements are based on historical cost valuation, with the exception of certain financial instruments and availablefor-sale financial assets, which by convention are stated at fair value. The methods used to determine the fair value of these instruments are presented in note 2.16 to the consolidated financial statements for the fiscal year ended December 31, 2008.

## 9.5.2 Management judgment and estimates

The preparation of the financial statements requires the use of judgments, best estimates and assumptions in determining the value of assets and liabilities, income and expenses recorded for the period, and positive and negative contingencies at year-end. The figures in future financial statements may differ from current estimates due to changes in these assumptions or economic conditions.

The principal sensitive accounting methods involving use of estimates and judgments are described below. Given their importance in the EDF group's financial statements, the impact of any change in assumption in these areas could be significant.

## 9.5.2.1 NUCLEAR PROVISIONS

The measurement of provisions for the back-end of the nuclear cycle, decommissioning and last cores is sensitive to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules. A revised estimate is therefore established at each closing date to ensure that the amounts accrued correspond to the best estimate of the costs eventually to be borne by the Group. Any significant differences resulting from these revised estimates could entail changes in the amounts accrued.

These provisions amount to €29,018 million at December 31, 2008 (€30,484 million at December 31, 2007).

A change in the discount rate would be considered as a change in estimate in the same way as a change in disbursement schedule or contractor's quote, and the impacts would be recognized as follows:

- in the corresponding assets if the provision was initially covered by balance sheet assets;
- in the income statement in all other cases.

Such a change could have a significant impact on the consolidated financial statements.

## 9.5.2.2 PENSIONS AND OTHER LONG-TERM AND POST-EMPLOYMENT BENEFITS

The value of pensions and other long-term and post-employment benefit obligations is based on actuarial valuations that are sensitive to assumptions concerning discount rates and wage increase rates, and all the actuarial assumptions used.

These provisions amount to €13,719 million at December 31, 2008 (€13,763 million at December 31, 2007) (for more details, see notes 2.2, 32.5 and 3.1 to the consolidated financial statements for the fiscal year ended December 31, 2008).

#### 9.5.2.3 IMPAIRMENT OF GOODWILL AND LONG-TERM ASSETS

Impairment tests on goodwill and long-term assets are sensitive to the macro-economic and segment assumptions used, and medium-term financial forecasts. The Group therefore revises the underlying estimates and assumptions based on regularly updated information.

The net value of goodwill on subsidiaries and joint ventures is €6,807 million at December 31, 2008 (€7,266 million at December 31, 2007).

#### 9.5.2.4 FINANCIAL INSTRUMENTS

In measuring the fair value of unlisted financial instruments (essentially energy contracts), the Group uses valuation models involving a certain number of assumptions subject to unforeseeable developments. Any change in those assumptions could have a significant impact on the financial statements.

#### 9.5.2.5 ENERGY AND DELIVERY NOT YET METERED

As explained in note 2.7 to the consolidated financial statements at December 31, 2008, the quantities of energy delivered but neither measured nor billed are calculated at the reporting date based on consumption statistics and selling price estimates. These statistics and estimates are sensitive to the assumptions used in determining the portion of sales not billed at the closing date.

## 9.5.2.6 VALUATION OF OBLIGATIONS CONCERNING FRENCH PUBLIC DISTRIBUTION CONCESSION ASSETS TO BE REPLACED

In view of the specific nature of French public electricity distribution concessions, the Group has opted to present its obligation to renew property, plant and equipment in the balance sheet at a value corresponding to the amount of contractual commitments as calculated and disclosed to the grantors in the annual business reports. An alternative approach would be to value the obligations based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life. The impacts this alternative approach would have had on the accounts are shown in note 2.24 to the consolidated financial statements at December 31, 2008 for information. Whatever valuation method is used.

measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of cost and disbursement dates.

## 9.5.2.7 TRANSITION TARIFF SYSTEM (TARIF RÉGLEMENTÉ TRANSITOIRE D'AJUSTEMENT DE MARCHÉ OR TARTAM)

To assess the contribution payable by the Group in application of the transition tariff defined in the French laws of December 7, 2006 and August 4, 2008, various assumptions have been used based on the best available information and forecasts, particularly regarding the numbers of customers applying to benefit from this tariff, developments in electricity market prices and the share of the compensation to be financed by the Contribution to the Public Electricity Service (Contribution au Service Public de l'Électricité or CSPE) at each reporting date.

## 9.5.2.8 OTHER MANAGEMENT JUDGMENTS

The use of estimates and assumptions is also particularly important in measuring the amounts of the Contribution to the Public Electricity Service (CSPE) receivable for the year, and in the recognition of deferred tax assets.

# 9.6

# Segment reporting of financial information

Segment information for the EDF group is reported in note 7 to the consolidated financial statements at December 31, 2008.

The breakdown used by the EDF group for geographical areas is as follows:

- "France", which refers to EDF and its subsidiaries RTE EDF Transport and ERDF, comprising their regulated activities (mainly Distribution and Transmission) and deregulated activities (mainly Generation and Supply);
- "United Kingdom", which refers to the EDF Energy subgroup;
- "Germany", which refers to the entities of the EnBW subgroup;
- "Italy", which covers all the entities located in Italy, principally the Edison subgroup, TDE, and Fenice;
- "Rest of Europe", which groups together the other European entities, mostly located in continental Europe, and new investments and businesses including Électricité de Strasbourg, Dalkia, Tiru, EDF International, EDF Énergies Nouvelles and EDF Trading;
- "Rest of the World", which covers entities in the US, Latin America and Asia.

# 9.7

# Analysis of the consolidated income statement for 2008 and 2007

Veges anded December 24 (in millions of Fuers)	2008	2007
Years ended December 31 (in millions of Euros)		2007
Sales	64,279	59,637
Fuel and energy purchases	(27,022)	(23,215)
Other external expenses	(10,258)	(9,797)
Personnel expenses	(10,476)	(9,938)
Taxes other than income taxes	(3,171)	(3,236)
Other operating income and expenses	2,083	1,759
Prolongation of the TaRTAM transition tariff system (law of August 4, 2008)	(1,195)	0
Operating profit before depreciation and amortization (EBITDA)	14,240	15,210
Net depreciation and amortization	(5,713)	(5,628)
Net increases in provisions for renewal of property, plant and equipment operated under concession	(526)	(504)
Impairments / Reversals	(115)	(150)
Other income and expenses	25	1,063
Operating profit (EBIT)	7,911	9,991
Financial result	(3,167)	(2,534)
Income before taxes of consolidated companies	4,744	7,457
Income taxes	(1,561)	(1,841)
Share in income of companies accounted for under the equity method	352	168
Net income from discontinued operations	0	9
GROUP NET INCOME	3,535	5,793
Minority interests	135	175
EDF NET INCOME	3,400	5,618
Earnings per share (in Euros)	1.87	3.08
Diluted earnings per share (in Euros)	1.87	3.08

## **9.7.1 Sales**

## +10.6% organic growth in consolidated sales

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
France	34,264	32,232	2,032	6.3	6.3
United Kingdom	8,244	8,353	(109)	-1.3	13.3
Germany	7,467	6,900	567	8.2	9.0
Italy	6,042	4,658	1,384	29.7	30.7
Rest of Europe	7,639	6,225	1,414	22.7	17.4
Europe excluding France	29,392	26,136	3,256	12.5	16.2
Rest of the World	623	1,269	(646)	-50.9	2.0
GROUP SALES	64,279	59,637	4,642	7.8	10.6

The EDF group's consolidated sales totaled €64,279 million in 2008, a rise of 7.8% from 2007. The increase includes negative foreign exchange effects of -€1,182 million or -2.0% mostly associated with the fall in the pound sterling with regard to the Euro, and negative effects of changes in the scope of consolidation (€480 million or -0.8%) principally resulting from the disposal of EDF assets in Mexico in late 2007, which was partly offset by acquisitions in the Rest of Europe segment.

Without these effects, sales showed organic growth of +10.6%. This organic growth concerns all segments, in Europe excluding France (+16.2%) and France (+6.3%).

Organic growth in Europe excluding France was mainly located in Italy (+30.7%), in the Rest of Europe (+17.4%) and the United Kingdom (+13.3%)

The period was marked by positive price effects in all segments, as well as favorable weather conditions (a colder winter) and higher sales volumes on the wholesale markets, particularly in Italy.

In France, sales for 2008 amounted to €34,264 million, corresponding to organic growth (1) of 6.3%: 5.3% for electricity sales and 1% for natural gas and services. For electricity, the organic growth reflects the impact of tariff and wholesale prices rises, but also the volume effect due primarily to higher final demand, caused chiefly by more favorable weather conditions (a colder winter) than in 2007.

Sales **outside France**, amounted to €30,015 million, an increase of 9.5% or organic growth of 15.6%.

In **Europe excluding France**, sales rose 12.5% to €29,392 million with organic growth of 16.2%.

In the **United Kingdom**, EDF Energy registered sales of €8,244 million down by 1.3% from 2007 due to the falling pound sterling (-14.4%) but corresponding to organic growth of 13.3%, mostly as a result of tariff increases.

In **Germany**, consolidated sales rose by 8.2% to €7,467 million, with organic growth of 9.0%. 79% of this growth is attributable to electricity sales and 21% to natural gas and other sales. The increase in electricity sales resulted primarily from the rise in prices; price rises were also a factor in gas sales growth, although they were partly offset by lower volume sold. The overall increase in sales also includes a negative effect (-€51 million) of change in the scope of consolidation following the sale of U-Plus in May 2007.

In **Italy**, Group sales amounted to €6,042 million, 29.7% higher than in 2007 (organic growth of 30.7%).

At Edison, which accounts for most of this growth, the principal factor was the price effect and higher sales on the markets.

At **Fenice**, the rise in sales was mainly caused by new installations coming on line and favorable weather conditions.

In the **Rest of Europe**, sales reached €7,639 million, showing growth of 22.7% (organic growth of 17.4%).

Sales for this area include the positive €295 million (+4.7%) effect of changes in the scope of consolidation (principally the acquisition of Eagle Energy Partners by EDF Trading, and developments in Central Europe), together with a positive €33 million (0.5%) foreign exchange effect. The growth results primarily from expansion by EDF Trading, EDF Énergies Nouvelles, Dalkia and business in Central Europe.

In the **Rest of the World**, which accounts for 1.0% of total Group sales. the contribution to consolidated sales declined by 50.9% following the sale of assets in Mexico in late 2007.

This segment nevertheless registered organic growth of 2.0% chiefly thanks to the tariff increase in China.

## **9.7.2 EBITDA**

### 3.7% organic growth in EBITDA, excluding the impact of the law of August 4, 2008

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	64,279	59,637	4,642	7.8	10.6
EBITDA (excluding the impact of the law of August 4, 2008)	15,435	15,210	225	1.5	3.7
EBITDA	14,240	15,210	(970)	-6.4	-4.2

<sup>1</sup> In France, organic growth correspond to nominal growth.

## Operating and Financial Review

Consolidated EBITDA for 2008 was €14,240 million, down by 6.4% from 2007 (organic degrowth of 4.2%).

Excluding the effect of the provision related to prolongation of the TaRTAM transition tariff system by the law of August 4, 2008 (€1,195 million), EBITDA amounted to €15,435 million.

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
France	9,020	9,996	(976)	-9.8	-9.8 <sup>(1)</sup>
United Kingdom	944	1,285	(341)	-26.5	-11.9
Germany	1,114	1,031	83	8.1	10.1
Italy	911	910	1	0.1	2.9
Rest of Europe	2,045	1,655	390	23.6	21.9
Europe excluding France	5,014	4,881	133	2.7	6.9
Rest of the World	206	333	(127)	-38.1	0.0
GROUP EBITDA	14,240	15,210	(970)	-6.4	-4.2

<sup>(1)</sup> Excluding the provision associated with prolongation of the TaRTAM transition tariff system, EBITDA in France registered organic growth of 2.2%.

Growth in EBITDA mainly concerned the Rest of Europe and Germany.

In France, EBITDA declined by 9.8%.

Excluding the provision associated with prolongation of the TaRTAM transition tariff system, EBITDA in France registered organic growth of 2.2%.

France contributed 63.3% of Group EBITDA in 2008 (65.7% in 2007). This contribution would have been 66.2% without the effect of prolongation of the TaRTAM transition tariff system.

In Europe excluding France, EBITDA progressed by 2.7% with organic

In the **Rest of the World**, EBITDA saw a sharp downturn (-38.1%). Based on a constant scope of consolidation and exchange rates, it remained stable.

The EBITDA/sales ratio for 2008 was 22.2% (24.0% before the impact of prolongation of the TaRTAM transition tariff system) compared to 25.5% in 2007

It was noticeably lower than the previous year in France (-4.7%, or -1.2% excluding the impact of prolongation of the TaRTAM transition tariff system), Italy (-4.4%) and the United Kingdom (-3.9%), slightly higher in the Rest of Europe (0.2%) and stable in Germany.

## 9.7.2.1 FUEL AND ENERGY PURCHASES

Fuel and energy purchases amounted to €27,022 million, an increase of €3,807 million (+16.4%) from 2007, corresponding to organic growth of 21.2%.

These purchases increased in France (+€1,418 million), Italy (+€1,438 million), the United Kingdom (+€592 million), Germany (+€506 million) and the Rest of Europe (+€358 million), but decreased in the Rest of the World (-€505 million).

In **France**, fuel and energy purchases were up by 17.8%, mainly as a result of higher purchase obligations, the higher cost of energy purchases to compensate for network losses, and the increase in purchases caused by expanding natural gas sales. Fuel and energy purchases in 2007 had benefited from the favorable impact of adjustments to nuclear provisions in application of the Law of June 28, 2006.

In Italy, the 45.5% rise in these purchases is explained by the rise in commodity prices and the greater volumes of sales on the markets.

In the **United Kingdom**, an increase of 11.9% was observed; excluding the foreign exchange effect, the increase would be 26.3% and is largely attributable to the increase in commodity prices on the markets and the application of IAS 39, which had a strongly negative impact in 2008 (-€287 million, after a positive +€151 million effect in 2007).

In Germany, the 12.1% increase mainly results from significant growth in the electricity business.

In the **Rest of Europe**, the overall rise (16.7%) includes a significant foreign exchange effect (1.9%) and the effect of changes in the scope of consolidation (4.7%). The organic increase (10.1%) in fuel and energy purchases in this segment is essentially due to price effects, but also to the development of EDF Énergies Nouvelles and expansion in Central Europe.

In the **Rest of the World**, the decline of -62.3% is essentially a consequence of the sale of assets in Mexico in late 2007.

## 9.7.2.2 OTHER EXTERNAL EXPENSES

Other external expenses amounted to €10,258 million, €461 million (+4.7%) higher than in 2007, with organic growth at 6.5%.

This increase reflects higher external expenses in **France** (+€449 million or 8.2%) primarily required for nuclear maintenance, and also in the **Rest** of Europe (+€432 million or +31.2%), attributable to EDF Énergies Nouvelles and Central Europe.

In the **United Kingdom**, other external expenses were down by €263 million (-22.9%) due principally to termination of the Metronet contract.

#### 9.7.2.3 PERSONNEL EXPENSES

Personnel expenses amounted to €10,476 million, up by €538 million (+5.4%) from 2007, with organic growth at 6.1%.

Most of this increase concerns France (+€451 million or 6.1%) and in the Rest of Europe (+€185 million or 19.8%).

In **France**, the 6.1% increase incorporates the effects of the support measures for the pension reform, and payroll-related measures (employee profit sharing scheme, employer's contribution for the employee share offering).

The rise in the **Rest of Europe** essentially results from business growth, principally at EDF Trading and EDF Énergies Nouvelles.

In the **United Kingdom** personnel expenses decreased by €97 million; excluding the foreign exchange effect and changes in the scope of consolidation, they rose by 1.7%.

Personnel expenses were slightly down (-2.6%) in Germany, and registered a 6.5% increase in Italy.

## 9.7.2.4 TAXES OTHER THAN INCOME TAXES

**Taxes other than income taxes** totaled €3,171 million in 2008, a decrease of €65 million (-2.0%) from 2007. Organic degrowth stood at 1.7% and was attributable to the cap on business tax in France.

#### 9.7.2.5 OTHER OPERATING INCOME AND EXPENSES

Other operating income and expenses generated net income of €2,083 million in 2008, €324 million (18.4%) higher than in 2007. The corresponding organic growth of 21.0% is essentially explained by the increase in these expenses in **France** (+€455 million), chiefly resulting from recognition of non-recurring income on the sale of nuclear fuel services and the unfavorable adjustment of provisions in 2007, in order to cover the hydro-nuclear tax associated with the application of the TarTAM transition tariff system until mid-2009 (law of December 7, 2006).

## 9.7.2.6 EFFECTS OF THE LAW OF AUGUST 4, 2008

Prolongation of the TaRTAM transition tariff system to June 30, 2010 is reflected in a €1,195 million expense for 2008 corresponding to the estimated value of compensation payable to competitors between July 2009 and June 2010.

## 9.7.3 EBIT

## 20.8% decline in EBIT

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
EBITDA	14,240	15,210	(970)	-6.4	-4.2
Net depreciation and amortization	(5,713)	(5,628)	(85)	1.5	4.0
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(526)	(504)	(22)	4.4	4.4
(Impairments) / Reversals	(115)	(150)	35	-23.3	-20.7
Other income and expenses	25	1,063	(1,038)	-97.6	-97.8
OPERATING PROFIT (EBIT)	7,911	9,991	(2,080)	-20.8	-18.9

EBIT reached €7,911 million in 2008, 20.8% lower than in 2007 (organic degrowth of 18.9%).

This decline is essentially explained by the lower EBITDA, and nonrecurrent income items recognized in 2007.

Excluding the non-recurring items of 2007 and 2008, EBIT would have increased by +3.0%.

## 9.7.3.1 OTHER INCOME AND EXPENSES

Other income and expenses resulted in a net gain of €25 million in 2008, after the gain of €1,063 million in 2007.

Other income and expenses in France in 2007 included income of €620 million deriving mainly from recognition of the positive €555 million impact on the provision for renewal caused by extension of the useful lives of substation buildings and electric metering equipment, and the lower cost of replacing this equipment. They also included gains of €425 million by EDF International on disposal of business assets in Argentina and Mexico.

## 9.7.4 Financial result

(in millions of Euros)	2008	2007	Variation	Variation (%)
Cost of gross financial indebtedness (1)	(1,657)	(1,605)	(52)	3.2
Discount expense	(2,797)	(2,632)	(165)	6.3
Other financial income and expenses (1)	1,287	1,703	(416)	-24.4
GROUP TOTAL	(3,167)	(2,534)	(633)	25.0

<sup>(1)</sup> The figures published at December 31, 2007 have been reclassified in order to offset the €113 million foreign exchange gain on the borrowing financing the UK subsidiaries, which is included in gross financial indebtedness, by changes in the fair value and the foreign exchange result related to instruments used for economic hedging of that debt, which are included under "Other financial income and expenses" (see notes 17.1 and 17.3 to the consolidated financial statements).

The financial result for 2008 was -€3,167 million, down by €633 million (25.0%) from 2007. This change is mainly attributable to the following:

- a €52 million increase in the cost of gross indebtedness: despite the €9,5 billion rise in loans and other financial liabilities in 2008, particularly in the second half of the year, the rise in the cost of indebtedness was limited through the optimization of credit terms and the favorable effect of the fall in the pound sterling;
- a €165 million increase in discount expenses, essentially in France, relating to the increase in the basis for nuclear provisions in late 2007 and the application of a higher discount rate for pension obligations in 2008;
- a €416 million decrease in other financial income and expenses, resulting from higher impairment net of reversals (principally relating to the investment in Constellation), the decline in interest income due to the lower average volume of liquid assets, the decrease in gains on disposal of non-consolidated investments, the favorable events of 2007 that had no equivalent in 2008, and the unfavorable developments on the financial markets.

## 9.7.5 Income taxes

**Income taxes** for 2008 amounted to €1,561 million, compared to €1,841 million for 2007.

The €280 million decrease between 2007 and 2008 results from three major factors:

- the automatic decrease in taxes following the €2,713 million decline in income before taxes of consolidated companies in France between 2007 and 2008:
- tax rate reductions enacted in 2007 and applied in 2008 in Germany, Italy and the United Kingdom, which had a significant favorable impact on the 2007 financial statements (€493 million) by reducing the value of deferred tax liabilities;
- the smaller impact in 2008 of a tax on energy sector companies' profits in Italy and the phasing out of Industrial Buildings Allowances in the United Kingdom.

## 9.7.6 Net income, Group share

The **Group share of net income** was €3,400 million at December 31, 2008, 39.5% lower than in 2007 (€5,618 million).

This decline is mainly due to the lower income before taxes of consolidated companies (-€2,713 million) despite the increase in the share in income of companies accounted for under the equity method (+€184 million), and the reduction in income taxes (€280 million).

### Share in income of companies accounted for under the equity method

The share in income of companies accounted for under the equity method was €352 million in 2008, up by €184 million or 109.5% from 2007. This increase is mainly explained by two items recorded in 2007 (allocations to provisions in the United Kingdom and a change of consolidation method for SSE in Slovakia, which has been proportionally consolidated since January 1, 2007).

The Group net income excluding non-recurring items (1) was €4,308 million in 2008, €369 million or 7.9% lower than 2007. Excluding the effect of application of IAS 39 on commodities, the net income excluding non-recurring items is €4,635 million, corresponding to organic growth of 5.0% in 2008.

1 Group net income excluding non-recurring items.

Non-recurring items, net of taxes, in 2008: -€908 million: prolongation of the TaRTAM transition tariff system -€783 million: Pensions in France: +€23 million: Gains on sales by Dalkia: +€59 million: Net impairment on several items: -€210 million: Other items: +€3 million Non-recurring items, net of taxes, in 2007: +€941 million: Impact of the change in useful life of substation buildings and electronic metering equipment, and effect of the reduction in renewal costs for this metering equipment: €338 million; capital gains on disposals of assets in Latin America: +€487 million (+€376 million on sales of assets in Mexico and +€111 million on sale of the 25% residual investment in Edenor); reduction in German income tax rates (+€304 million); impairment of -€124 million, mainly related to the lower transmission fees in Germany: -€64 million for recognition of risks on investments and other items.

# 9.8

# Breakdown of EBIT by geographical area

The Group's segment reporting principles are presented in note 7 to the consolidated financial statements at December 31, 2008.

The breakdown of EBIT by geographical area is as follows:

2008 (in millions of Euros)	France	United Kingdom	Germany	Italy	Rest of Europe	Europe excluding France	Rest of the World	Total
SALES	34,264	8,244	7,467	6,042	7,639	29,392	623	64,279
Fuel and energy purchases	(9,362)	(5,567)	(4,682)	(4,599)	(2,507)	(17,355)	(305)	(27,022)
Other external expenses	(5,955)	(884)	(1,087)	(451)	(1,816)	(4,238)	(65)	(10,258)
Personnel expenses	(7,794)	(657)	(685)	(197)	(1,118)	(2,657)	(25)	(10,476)
Taxes other than income taxes	(2,845)	(92)	(9)	(6)	(203)	(310)	(16)	(3,171)
Other operating income and expenses	1,907	(100)	110	122	50	182	(6)	2,083
Prolongation of the TaRTAM transition tariff system (Law of August 4, 2008)	(1,195)	0	0	0	0	0	0	(1,195)
OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION (EBITDA)	9,020	944	1,114	911	2,045	5,014	206	14,240
Net depreciation and amortization	(3,923)	(444)	(382)	(453)	(446)	(1,725)	(65)	(5,713)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(519)	0	0	0	(7)	(7)	0	(526)
(Impairments) / Reversals	(14)	0	(174)	(42)	88	(128)	27	(115)
Other income and expenses	35	0	0	0	(9)	(9)	(1)	25
OPERATING PROFIT (EBIT)	4,599	500	558	416	1,671	3,145	167	7,911
2007	France	United	Germany	Italy	Rest of	Europe	Rest of the	
(in millions of Euros)		Kingdom			Europe	excluding France	World	Total
SALES	32,232	8,353	6,900	4,658	6,225	26,136	1,269	59,637
Fuel and energy purchases	(7,944)	(4,975)	(4,176)	(3,161)	(2,149)	(14,461)	(810)	(23,215)
Other external expenses	(5,506)	(1,147)	(1,070)	(606)	(1,384)	(4,207)	(84)	(9,797)
Personnel expenses	(7,343)	(754)	(703)	(185)	(933)	(2,575)	(20)	(9,938)
Taxes other than income taxes	(2,894)	(111)	(11)	(1)	(200)	(323)	(19)	(3,236)
Other operating income and expenses	1,452	(80)	91	204	96	311	(4)	1,759
OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION (EBITDA)	9,996	1,285	1,031	910	1,655	4,881	333	15,210
Net depreciation and amortization	(3,836)	(475)	(363)	(440)	(411)	(1,689)	(103)	(5,628)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(497)	0	0	0	(7)	(7)	0	(504)
(Impairments) / Reversals	5	(1)	(146)	(8)	0	(155)	0	(150)
Other income and expenses	620	0	18	0	425	443	0	1,063

## **9.8.1** France

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	34,264	32,232	2,032	6.3	6.3
EBITDA	9,020	9,996	(976)	-9.8	-9.8
EBITDA excluding prolongation of the TaRTAM transition tariff system	10,215	9,996	219	2.2	2.2
EBIT	4,599	6,288	(1,689)	-26.9	-26.9
EBIT excluding prolongation of the TaRTAM transition tariff system	5,794	6,288	(494)	-7.9	-7.9

## 9.8.1.1 BREAKDOWN OF FINANCIAL INFORMATION FOR THE "FRANCE" SEGMENT

The following breakdown is applied to France's contribution to Group sales and EBITDA:

- "Regulated activities", comprising:
  - Transmission in mainland France;
  - Distribution in mainland France;
  - Generation and distribution by EDF in the island energy systems (IES).

The Transmission and Distribution activities are regulated by the Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE).

Sales for the regulated activities include the delivery cost included in integrated tariffs;

- "Deregulated activities" cover:
  - Generation, Supply and Optimization in mainland France;
  - Sales of engineering and consulting services.

## 9.8.1.2 MARKET OPENING

The French electricity market has been totally open to competition since July 1, 2007.

At December 31, 2008, EDF's market share for electricity in France was 85.5% for all final customers (compared to 85.2% at December 31, 2007).

## 9.8.1.3 SUPPLY-DEMAND BALANCE

Nuclear generation produced 417.6 TWh in 2008, practically stable (-0.4 TWh) compared to 2007. The variation in the second half-year reflects generation problems encountered in 2008, principally with certain alternator stators (see section 9.2.2.2.1, "Performance of nuclear power plants"). Hydropower generation output rose by 14.3% (+4.8 TWh). Fossil-fired generation produced 15.8 TWh.

Sales to final customers (excluding Eurodif) increased by 12.7 TWh as a result of weather conditions, particularly in the first half of the year, and sustained growth in consumption, which slackened in the second half-year as the economic crisis affected consumption by industrial customers. Sales to other actors in the electricity sector also rose by 2.7 TWh.

These changes in generation output and sales are reflected in the lower level of net sales on the wholesale markets (-14.2 TWh), which was mitigated by the rise in VPP (virtual power plant) capacity sales (+3.4 TWh).

#### 9.8.1.4 SALES

**France** contributed €34,264 million to Group sales, 6.3% more than in 2007, of which 5.3 points were contributed by electricity sales, and 1 point by other activities (sales of natural gas, and services).

The change in electricity sales includes positive effects on both volume (+1.5%) and price (+3.8%).

Electricity sales volumes primarily benefited from higher demand boosted by favorable weather conditions.

The positive price effect is principally due to wholesale electricity markets forward sales in more than one year in advance (auctions for which prices were set by contract in 2007), and the impact of the tariff increases of August 16, 2007 and August 15, 2008.

## 9.8.1.5 EBITDA

France's contribution to Group EBITDA was down by €976 million. Excluding the impact of prolongation of the TaRTAM transition tariff system (French law of August 4, 2008), this contribution amounted to €10,215 million, 2.2% higher than in 2007 (€9,996 million).

Favorable price and volume effects on sales were offset by sourcing costs for purchase obligations and energy purchases to cover electricity network losses, the rise in operating expenses mainly linked to higher maintenance costs, and the impact of the pension reform support measures in 2008.

## **FUEL AND ENERGY PURCHASES**

Fuel and energy purchases in France amounted to €9,362 million in 2008, an increase of €1,418 million (+17.8%) compared to 2007.

Most of this increase was attributable to the rise in prices and volumes for purchase obligations (itself caused by gas price rises and windpower development), the greater cost of energy purchases to cover electricity network losses, increases in fossil fuel prices and the higher level of purchases associated with expanding natural gas sales.

In 2008, this increase was accentuated by the positive impact on nuclear provisions in 2007 of the implementing provisions for the law of June 28, 2006 on sustainable management of radioactive materials and waste (€262 million).

#### OTHER EXTERNAL EXPENSES AND PERSONNEL EXPENSES

Other external expenses amounted to €5,955 million, 8.2% higher than in 2007. The rise mainly results from higher maintenance costs, particularly at nuclear plants following the problems encountered in generation facilities (mainly concerning steam generators and alternators), the additional costs generated by the transfer of the Distribution business to a subsidiary and the opening of the residential market to competition, and to a smaller degree, expenses associated with the development of services activities.

Personnel expenses totaled €7,794 million, a rise of 6.1% compared to 2007 (2% attributable to the effects of pension reform support measures and 2.9% relating to the employee savings and shareholding policy (profit sharing scheme, additional employer contribution, the Employee Offering of September 2008, and ACT07 free share plan).

#### TAXES OTHER THAN INCOME TAXES

These taxes declined by 1.7% (-€49 million), principally as a result of new capping rules for business tax.

## OTHER OPERATING INCOME AND EXPENSES

Other operating income and expenses increased by €455 million compared to 2007, largely as a result of recognition in 2008 of non-recurring income on a sale of nuclear fuel services (+€171 million) and the effect in 2007 of adjustments to provisions to cover the hydro-nuclear tax associated with the implementation of the TaRTAM transition tariff system until mid-2009 (+€231 million).

#### EFFECTS OF THE FRENCH LAW OF AUGUST 4, 2008

Prolongation of the TaRTAM transition tariff system from July 2009 to June 30, 2010 is reflected in a €1,195 million expense for 2008 corresponding to the compensation payable to competitors, based on expected volumes and assumptions regarding market price developments.

## 9.8.1.6 BREAKDOWN OF FINANCIAL INFORMATION FOR THE "FRANCE" SEGMENT BETWEEN REGULATED AND DEREGULATED **ACTIVITIES**

The following table shows the variations in sales and EBITDA in France for the Regulated and Deregulated Activities respectively between 2007 and 2008:

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
SALES	34,264	32,232	2,032	6.3	6.3
Deregulated activities	22,085	20,468	1,617	7.9	7.9
Regulated activities	13,175	12,378	797	6.4	6.4
Eliminations	(996)	(614)	(382)	62.2	62.2
EBITDA	9,020	9,996	(976)	-9.8	-9.8
Deregulated activities	4,979	6,141	(1,162)	-18.9	-18.9
Deregulated activities excluding prolongation of the TaRTAM transition tariff system	6,174	6,141	33	0.5	0.5
Regulated activities	4,041	3,855	186	4.8	4.8

The 7.9% increase in the **deregulated activities** sales is due to growth in electricity sales which benefited from positive effects on both price (forward prices and tariff increases in 2007 and 2008) and volumes, and higher natural gas sales.

Sales for the regulated activities rose by 6.4%, reflecting the impact of weather conditions and growth in demand (excluding weather conditions) for delivery sales.

Excluding the impact of prolongation of the transition tariff system (TaRTAM), the deregulated activities EBITDA rose by 0.5%, marked by lower net sales on the markets and an increase in expenses.

Positive price effects on sales were largely counterbalanced by the increase in sourcing costs for purchase obligations (through the CSPE compensation system) and fossil fuel costs, which were adversely affected by market price rises.

Operating expenses were affected by the increase in conversion and maintenance costs, pushed up by problems encountered at the nuclear plants, and the rise in personnel expenses resulting from the pension reform. The **regulated activities** EBITDA was up by €186 million (4.8%). The positive effect of higher sales volumes more than offset the rising cost of energy purchases to cover electricity network losses and the higher personnel expenses arising mainly from the pension reform.

### 9.8.1.7 EBIT

**France's** contribution to Group EBIT was €4,599 million, 26.9% less than for 2007. This decrease primarily results from the difference in EBITDA, affected by the law of August 4, 2008 prolonging the TaRTAM transition tariff system (-€1,195 million), and recognition in 2007 of a €555 million adjustment to the provision for renewal of concession assets following changes in the useful lives of substation buildings and electronic metering equipment, and the lower cost of renewal of this equipment.

Without these factors, EBIT would have registered a slight increase of 1.1%.

## 9.8.2 United Kingdom

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	8,244	8,353	(109)	-1.3	13.3
EBITDA	944	1,285	(341)	-26.5	-11.9
EBITDA excluding the impact of IAS 39	1,231	1,134	97	8.6	23.3
EBIT	500	808	(308)	-38.1	-23.4

#### 9.8.2.1 SALES

EDF Energy's contribution to consolidated sales for 2008 was €8,244 million, a decline of 1.3% but showing organic growth of 13.3% compared to 2007.

This decline includes a -14.4% foreign exchange effect associated with the fall in value of the pound sterling.

Organic growth was driven by the generation and supply activities, which benefited from rises in wholesale market prices and tariff increases for residential customers in January and July 2008. Electricity tariffs were raised successively by 7.9% and 17%, and natural gas tariffs by 12.9% and 22%.

Despite benefiting for the regulated part from the tariff increases announced in late 2007 and 2008 (April and October), network transmission activities suffered the negative effects of discontinuation of works invoiced to Metronet (without impact on EBITDA).

#### 9.8.2.2 EBITDA

**EDF Energy's** contribution to Group EBITDA stood at €944 million for 2008, a significant downturn (-26.5%) from 2007 corresponding to a 11.9% decline in organic growth compared to 2007.

The foreign exchange effect was negative at -€185 million (-14.4%).

The main factor in this sharp decrease in EBITDA was the increase in "Fuel and energy purchases" (+€592 million), which includes the impact of forward purchase and sale contracts. These contracts, which are derivatives that are not recorded as hedges under IAS 39, had a strong negative impact in 2008 (-€287 million) after the positive effect of 2007 (+€151 million). Settlement of 2007 contracts and appreciation on energy contracts entered into in late 2008 (unrealized positions), were affected by the fall in commodity prices (coal, electricity and gas) from July.

This impact masks the excellent performance of supply and generation activities, where tariff increases more than compensated the commodity price rises and the increase in generation costs, partly limited by hedging positions. Network activities also benefited from the rise in network access fees introduced in late 2007.

The increase in "Fuel and energy purchases" was partly offset by positive developments in other external purchases (-€263 million) and personnel expenses (-€97 million).

Excluding the impact of application of IAS 39 to commodities, organic growth in EBITDA stood at 23.3%.

## 9.8.2.3 EBIT

**EDF Energy's** contribution to Group EBIT was €500 million, 38.1% lower than 2007 (23.4% lower excluding the foreign exchange effect).

This decline reflects the lower level of EBITDA, and to a lesser extent the increase in net depreciation and amortization due to the higher level of investments

## **9.8.3 Germany**

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	7,467	6,900	567	8.2	9.0
EBITDA	1,114	1,031	83	8.1	10.1
EBIT	558	541	17	3.1	6.1

## 9.8.3.1 SALES

**EnBW's** contribution to Group sales for 2008 was €7,467 million, an increase of 8.2% from 2007, with organic growth of 9.0%.

This incorporates the negative effect of changes in the scope of consolidation related to the sale in late March 2007 of U-Plus, which contributed €51 million of sales for the Germany segment in 2007.

Sales growth essentially results from electricity: electricity sales, which account for 79% of EnBW's sales, increased by 8.2%, largely due to the rise in average prices both on the wholesale markets and for final customers.

The volume effect was also positive across all markets for residential and business customers.

Sales for the natural gas activities and other services increased by 11.6% as a result of price rises, partly offset by the lower volumes of natural gas sold to redistributors in response to strong competition in the sector.

#### 9.8.3.2 EBITDA

EnBW's contribution to Group EBITDA increased by 8.1% compared to 2007, with organic growth at 10.1%. This incorporates a negative effect of changes in the scope of consolidation (-€21 million) mainly due to the sale of U-Plus on March 31, 2007.

EBITDA for electricity activities registered strong organic growth, while EBITDA for natural gas activities was stable.

In the electricity activities, optimization of the generation fleet resulted in high margins, partly offset by lower income from network access fees and lower margins on sales to final customers.

In the natural gas activities, the positive impact of the winter weather was neutralized by the negative impact of more intense competition in the sector.

## 9.8.3.3 EBIT

**EnBW's** contribution to Group EBIT was €558 million, a significant increase of €17 million (3.1%) from 2007.

This increase reflects the rise in EBITDA (+€83 million), less the net allocations to depreciation and amortization and changes in impairment (from €146 million in 2007 to €174 million in 2008).

## **9.8.4** Italy

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	6,042	4,658	1,384	29.7	30.7
EBITDA	911	910	1	0.1	2.9
EBIT	416	462	(46)	-10.0	-7.1

## 9.8.4.1 SALES

Italy (1) contributed €6,042 million to consolidated sales, 29.7% more than in 2007 (organic growth of 30.7%) in an environment of rising energy costs.

The €1,314 million growth in sales by **Edison** was driven by both electricity and gas activities. Growth in electricity sales was essentially explained by rising prices and higher sales quantities on the wholesale markets, partly mitigated by lower sales to final customers.

Growth in natural gas sales was due to the significant price effect caused by sharp increases in hydrocarbon prices, together with a volume effect on the wholesale markets.

Changes in the scope of consolidation following the sale of seven thermoelectric plants in April 2008 had an effect of -€55 million.

Fenice's sales rose by €70 million (13%), chiefly due to the new plants and new facilities coming on line, as well as a colder winter than the previous year.

## 9.8.4.2 EBITDA

Italy contributed €911 million to the Group's consolidated EBITDA, practically stable compared to 2007 and up by 2.9% based on constant exchange rates and scope of consolidation.

**Edison** contributed €807 million to consolidated EBITDA in 2008, €16 million more than the €791 million contributed in 2007.

Organic growth in EBITDA was €42 million: the lower contribution of the gas activities was more than offset by the higher contribution of electricity activities. Changes in the scope of consolidation had an impact

The gas activities made a lower contribution, attributable both to the lower margins of first-half 2008 and the impact of the reversal of a provision in first-half 2007 as commodity price rises could not be passed on fully to final customers. EBITDA for the exploration and production activity registered an increase of close to 21.7%.

1 Edison Group and Fenice

The good performances by the electricity activities, principally driven by higher hydropower output and system services, were partly mitigated by the scheduled reduction of plant subsidies under the CIP6 incentive system.

Fenice's contribution to Group EBITDA stood at €106 million for 2008, down by €14 million from 2007. This decrease is primarily due to the lower levels of business with one major customer.

## 9.8.4.3 EBIT

Italy's contribution to consolidated EBIT amounted to €416 million, down by €46 million from 2007 due to higher depreciation and amortization expenses for new facilities at Edison and Fenice.

## 9.8.5 Rest of Europe

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	7,639	6,225	1,414	22.7	17.4
EBITDA	2,045	1,655	390	23.6	21.9
EBIT	1,671	1,663	8	0.5	-2.2

#### 9.8.5.1 SALES

The **Rest of Europe's** contribution to Group sales rose by €1,414 million or 22.7% to €7,639 million. This comprises the positive 4.7% effect of changes in the scope of consolidation, mainly resulting from acquisitions in Europe by Dalkia. There was also a foreign exchange effect of +0.5%. Organic sales growth for the Rest of Europe stood at +17.4% (€1,086 million), and was primarily attributable to EDF Trading, EDF Énergies Nouvelles, and business in Central Europe.

Sales by **EDF Trading** <sup>(1)</sup> amounted to €1,213 million, €543 million or 81% higher than in 2007, including the €17 million effect of changes in the scope of consolidation following acquisition of Eagle Energy Partners and Amstuw BV. The significant rise in the trading margin is linked to exceptional movements in commodity prices over 2008, which opened up more opportunities for action by EDF Trading.

In the **central European countries**, organic sales growth (€216 million) was mainly driven by business in Hungary and Poland.

In **Hungary**, the organic growth of €130 million benefited from positive price effects and good commercial development.

In **Poland**, organic growth (€86 million) chiefly resulted from Rybnik's price increase for sales to distributors, and the rise in spot prices on the markets.

Sales by **EDF Énergies Nouvelles** increased by 90.6% (€455 million), thanks to electricity generation levels, higher sales of structured assets and the consolidation of the EDF Énergies Nouvelles Réparties Group with its subsidiaries.

Sales by **Dalkia** showed organic growth of 10.3% (€202 million), mainly driven by international expansion and new developments.

## 9.8.5.2 EBITDA

The contribution to consolidated EBITDA by the Rest of Europe was €2,045 million, a rise of €390 million or 23.6% compared to 2007.

This increase includes the effect of changes in the scope of consolidation (+1.3%) and a positive foreign exchange effect (+0.4%).

Organic growth stood at 21.9% (+€362 million) and principally concerned EDF Trading.

Organic growth in EBITDA for the central European countries reached 8.1% (€24 million) and was mostly due to favorable price and tariff developments. This growth was chiefly concentrated in **Hungary**, where Demasz registered a strong increase in EBITDA resulting from favorable price and tariff effects and optimization of procurement terms. In Poland, rising electricity prices only partially offset the significant increase in coal prices and lower allocations of CO<sub>2</sub> emission quotas for the second period (Phase II of the NQAP): for several Polish companies, quotas were insufficient to cover emissions.

EBITDA growth at **EDF Énergies Nouvelles** was above the commitment made by the Group at the time of the IPO in 2006, despite adverse developments in the dollar and pound sterling exchange rates. All of the companies' businesses contributed to this growth.

**EDF Trading's** contribution to Group EBITDA totaled €1,024 million, a rise in line with its higher sales.

## 9.8.5.3 EBIT

The **Rest of Europe** contributed €1,671 million to Group EBIT, an increase of €8 million (0.5%) from 2007.

The increase of the EBIT for this segment benefited from the gain in EBITDA. However, the increase is modest compared to 2007 EBIT, which reflected EDF International's gains on sales of Edenor and the Mexican businesses (€456 million in total).

## 9.8.6 Rest of the World

(in millions of Euros)	2008	2007	Variation	Variation (%)	Organic growth (%)
Sales	623	1,269	(646)	-50.9	2.0
EBITDA	206	333	(127)	-38.1	0.0
EBIT	167	229	(62)	-27.1	10.5

#### 9.8.6.1 SALES

The contribution by the Rest of the World to Group sales stood at €623 million, €646 million or 50.9% lower than in 2007.

This decrease includes the negative effect of changes in the scope of consolidation (-€651 million) resulting from the sale of Mexican assets in 2007, and a negative foreign exchange effect of €21 million concerning China and Vietnam. Organic sales growth was +2.0%.

In Asia, sales stood at €304 million, corresponding to organic growth of 4.2% from 2007, essentially driven by the effect of rising coal prices for the Laibin plant in China.

## 9.8.6.2 EBITDA

The Rest of the World's contribution to Group EBITDA declined by €127 million (-38.1%), including the negative effect of changes in the scope of consolidation (-€114 million or -34.2%) relating to the sale of assets in Mexico.

On an organic basis, EBITDA was stable.

In Asia, EBITDA registered organic growth of 3.0%.

In the United States, it included the costs of developing nuclear activities, primarily at Unistar Nuclear Energy.

#### 9.8.6.3 EBIT

The contribution by the **Rest of the World** to Group EBIT declined by €62 million. This essentially reflects the €127 million decrease in EBITDA, offset by the €39 million reduction in depreciation (due to sale of the Mexican plants in late 2007) and a gain on disposal of unused turbines in Brazil (+€27 million).

# 9.9

# Net indebtedness, cash flow and investments

# **9.9.1** Cash flow

The table below summarizes the cash flows generated by the Group over the years 2007 and 2008:

(in millions of Euros)	2008	2007	Variation	Variation (%)
Net cash flow from operating activities	7,572	10,222	(2,650)	-25.9
Net cash flow used in investing activities	(16,665)	(5,428)	(11,237)	207.0
Net cash flow from (used in) financing activities	8,811	(2,116)	10,927	NS
Net increase (decrease) in cash and cash equivalents	(282)	2,678	(2,960)	NS
Cash and cash equivalents – opening balance	6,035	3,308	2,727	82.4
Effect of currency fluctuations	(79)	(42)	(37)	88.1
Financial income on cash and cash equivalents	188	96	92	95.8
Effect of other reclassifications	7	(5)	12	NS
Cash and cash equivalents – closing balance	5,869	6,035	(166)	-2.8

## 9.9.1.1 NET CASH FLOW FROM OPERATING ACTIVITIES

( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	2008	2007	Variation	Variation
(in millions of Euros)				(%)
Income before tax from consolidated companies	4,744	7,457	(2,713)	-36.4
(Impairment)/Reversals	115	150	(35)	-23.3
Accumulated depreciation and amortization, provisions and changes in fair value	4,673	6,130	(1,457)	-23.8
Financial income and expenses	1,174	642	532	82.9
Dividends received from companies accounted for under the equity method	110	130	(20)	-15.4
Capital gains/losses	(245)	(860)	615	-71.5
Change in working capital	(211)	(269)	58	-21.6
Net cash flow from operations	10,360	13,380	(3,020)	-22.6
Net financial expenses disbursed	(1,068)	(921)	(147)	16.0
Income taxes paid	(1,720)	(2,237)	517	-23.1
Net cash flow from operating activities	7,572	10,222	(2,650)	-25.9

The net cash flow from operating activities amounted to €7,572 million in 2008, a decrease of €2,650 million from 2007, mainly due to:

(i) the €3,020 million decline in net cash flow from operations, primarily caused by changes over the period in the income before taxes of consolidated companies as a result of factors described earlier (in particular, in section 9.7, "Analysis of the consolidated income statement for 2008 and 2007"), and "Accumulated depreciation, amortization and provisions and changes in fair value", which chiefly reflect changes in fair value associated with the situation on the commodity and energy markets. The change in financial income and expenses corresponds to the developments discussed in section 9.7.4, "Financial result", and the lower level of gains on sales results principally from the fact that there was no equivalent in 2008 to the sale of businesses in Mexico and Argentina in 2007 (see section 6.3.2.1 of the Group's 2007 Document de Référence).

The **change in working capital** was an increase of €211 million. After adjustment for the effects of the contract between AREVA and EDF<sup>(1)</sup> which has an impact of €2,300 million (see section 6.2.1.1.3.4, "The nuclear fuel cycle and related issues – B. Back-end"), the working capital is up by €2,511 million in 2008, as a result of a €2,212 million increase in France and a €299 million increase in other countries. In **France**, the significant increase was mainly explained by volume and price effects related to business growth and the rise in costs and prices. Most of these rises concerned inventories (essentially nuclear fuel: €452 million), trade receivables (€425 million) and margin calls linked to exceptional energy price fluctuations (coal, oil, etc). These margin calls

(€1,440 million) correspond to market hedges by EDF Trading for the purposes of business in France.

This change in working capital incorporates the effects of optimization action under the "Excellence Opérationnelle" program, which saved €471 million in 2008.

**Outside France**, working capital increased as a result of price and volume effects associated with business growth and rising costs (+€208 million for EDF Energy, +€394 million for Edison, and +€337 million for EDF Energies Nouvelles). The rest of the change is due to an improvement in EDF Trading's working capital following the margin agreement signed with France late in 2008.

Margin calls on the Group's optimization and trading activities led to a €0.7 billion increase in working capital.

This largely resulted from the negative impact of falling commodity prices on the value of market hedges entered into by optimizers via EDFT as part of the Group's risk management policy. In line with market practices, margin calls were carried out for these positions, in order to reassure EDFT's counterparties regarding the risk of default by the company.

The margin calls will be repaid upon delivery of the contracts at the latest;

- (ii) the €517 million decrease in income taxes paid, resulting mainly from:
- the decline in taxable income in France between 2007 and 2008,
- the taxes disbursed in 2007 by EnBW, with no equivalent in 2008,
- the lower level of taxable income and a tax credit received for past years in the United Kingdom.

Operating cash flow (2) totaled €10,083 million in 2008, 5.3% lower than for 2007 (€10,647 million). Details are shown below:

	2008	2007	Variation	Variation
(in millions of Euros)				(%)
Net cash flow from operations	10,360	13,380	(3,020)	-22.6
Net financial expenses disbursed	(1,068)	(921)	(147)	16.0
Income taxes paid	(1,720)	(2,237)	517	-23.1
Change in working capital (1)	2,511	269	2,242	833.5
Taxes generated by non-recurring items	0	156	(156)	100.0
Operating cash flow (FFO)	10,083	10,647	(564)	-5.3

(1) After reclassification of the effects of the AREVA-EDF contract, which has no net impact on net cash flow from operations.

<sup>1</sup> This contract does not affect net cash flows from operations, as the expense corresponds to disbursements to be made in future years. It is also offset in EBITDA through reversal of an equivalent amount from provisions.

<sup>2</sup> EDF uses Operating cash flow, equivalent to Funds From Operations or FFO, as an indicator to assess the Group's capacity to generate free cash flow. Operating cash flow is equivalent to net cash flow from operating activities (reported in the cash flow statement) excluding changes in working capital, less net financial expenses disbursed and income taxes paid, adjusted for the impact of non-recurring effect items.

#### 9.9.1.2 NET CASH FLOW USED IN INVESTING ACTIVITIES

Net cash flow used in investing activities amounted to €16,665 million in 2008, compared to €5,428 million in 2007.

The following table sets forth the breakdown of net cash flow used in investing activities between purchases and disposals of property, plant and equipment and intangible assets, acquisition and disposals of companies net of cash acquired/transferred, and the change in financial assets:

(in millions of Euros)	2008	2007	Variation	Variation (%)
Purchases of property, plant and equipment and intangible assets	(9,703)	(7,490)	2,213	29.6
Disposals of property, plant and equipment and intangible assets	214	229	(15)	-6.6
Net Capex <sup>(1)</sup>	(9,489)	(7,261)	(2,228)	30.7
Acquisitions/disposals of companies, net of cash acquired	(281)	253	(534)	-211.1
Changes in financial assets	(6,895)	1,580	(8,475)	-536.4
Net cash flow used in investing activities	(16,665)	(5,428)	(11,237)	207.0

<sup>(1)</sup> In managing its industrial investments, the Group uses the net Capex indicator ("Purchases of property, plant and equipment and intangible assets" net of "Disposals of property, plant and equipment and intangible assets") in order to monitor the evolution of its investments in tangible and intangible assets.

## - Purchases of property, plant and equipment and intangible assets (Gross Capex)

#### An increase of more than 29% from 2007

Operating investments (gross capital expenditure) for 2008 amounted to €9,703 million, 29.5% or +€2,213 million higher than for 2007. Changes over the period in the Group's gross capital expenditure were as follows:

At December 31 (in millions of Euros)	2008	2007	Variation	Variation (%)
France: Regulated activities	2,873	2,569	304	11.8
France: Deregulated activities	2,299	1,970	329	16.7
Total France	5,172	4,539	633	14.0
United Kingdom	1,377	1,171	206	17.6
Germany	572	379	193	50.9
Italy	474	397	77	19.4
Rest of Europe	1,873	934	939	100.6
Europe excluding France	4,296	2,881	1,415	49.1
Rest of the World	235	70	165	NS
OPERATING INVESTMENTS (GROSS CAPEX)	9,703	7,490	2,213	29.5

Capital expenditure increased in all segments.

In France, it increased by €633 million or +14.0% and concerned both the regulated activities (+€304 million) and the deregulated activities (+€329 million).

Investments in the regulated activities rose by €304 million (+11.8%) and were principally for major transmission channels, interconnections, and regional network development and renewal for the transmission networks, and development, reinforcement and replacement for the distribution networks, as well as preventive measures against weather risks. Capital expenditure for the island energy systems also saw a marked rise, particularly for new generation facilities.

Most of the increase in investments in the deregulated activities was for generation, where capital expenditure was up from €1,703 million in 2007 to €2,150 million in 2008. These investments are for development of nuclear generation capacities (construction of the EPR in Flamanville) and fossilfired generation capacities (reactivation of oil-fired plants, commissioning of combustion turbines), but also for operating asset maintenance (notably the SuPerHydro program for hydropower, and maintenance and lifespan extension programs for nuclear facilities).

In the United Kingdom, gross capital expenditure amounted to €1,377 million for 2008, up by 17.6% from 2007. In the deregulated sector, this increase resulted from expenses incurred for construction of the new West Burton fossil-fired plant and development of new windpower capacities, while in the regulated activities, the rise in investments related to development and reinforcement of the distribution network as negotiated with the regulator.

In **Germany**, capital expenditure totaled €572 million for 2008, an increase of close to 51% from 2007. This rise is explained by the higher investments for the Karlsruhe plant and construction of new office buildings (principally EnBW City in Stuttgart).

In Italy, capital expenditure increased by 19.4% (to €474 million) as capacities for electricity generation and natural gas storage were expanded.

In the **Rest of Europe**, capital expenditure doubled in one year to reach €1,873 million. This increase is attributable to the continuing development of several wind farms and photovoltaic solar plants by EDF Énergies Nouvelles, projects in central European countries and the Netherlands, and acquisition of North Sea gas fields.

Finally, the higher capital expenditure in the Rest of the World (+€165 million compared to 2007) is explained by the greater investments in international nuclear activities, particularly in the United States and the United Kingdom.

## - ACQUISITIONS / DISPOSALS OF COMPANIES, NET OF CASH ACQUIRED:

This heading comprises acquisitions and disposals of shares in consolidated companies, net of the related cash. In 2007, it essentially comprised the sale of businesses in Argentina and Mexico.

In 2008, the main transactions were:

• disposals: sale of the CIP6 plants, Dolomiti Edison Energy and Hydros by Edison in Italy:

• acquisitions: acquisition of Eagle Energy Partners by EDF Trading and developments at Dalkia.

## - Changes in financial assets

The variation in financial assets between 2007 and 2008 amounted to -€8,475 million. This change is primarily explained by the development of international nuclear activities, principally in the United Kingdom with the first phase of the acquisition of British Energy for €2,679 million, and in the United States with the acquisition of shares in Constellation Energy Group for €412 million and payment in 2008 of €854 million in connection with the planned acquisition of 49.99% of its assets. Most of the balance corresponds to ordinary cash management operations.

## 9.9.1.3 NET CASH FLOW FROM FINANCING ACTIVITIES

The following table sets forth the breakdown of net cash flow from financing activities:

(in millions of Euros)	2008	2007	Variation	Variation (%)
Issuance of borrowings	15,717	7,059	8,658	122.7
Repayment of borrowings	(4,882)	(6,357)	1,475	-23.2
Dividends paid by EDF	(2,438)	(3,170)	732	-23.1
Dividends paid to minority interests	(90)	(90)	0	0.0
Capital increase subscribed by minority interests	249	178	71	39.9
Increase in special concession liabilities	285	238	47	19.8
Investment subsidiaries	150	32	118	368.8
Capital increase by EDF	(180)	(6)	(174)	2,900.0
Net cash flow from (used in) financing activities	8,811	(2,116)	10,927	-516.4

In 2008, the cash flow related to financing activities generated a net inflow of €8,811 million, a difference of €10,927 million from 2007. This change is mainly due to:

- the seven bond issues of 2008 totaling €8,658 million (see section 9.2.2.5, "Financing" for details);
- lower bond repayments, which decreased by €1,475 million;
- dividends paid by EDF: €2,438 million in 2008 compared to €3,170 million in 2007;
- an increase in investment subsidies.

## 9.9.2 Net indebtedness

Net indebtedness comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or securities with initial maturity of over three months that are readily convertible into cash regardless of their maturity and are managed according to a liquidity-oriented policy.

Changes in the Group's net indebtedness were as follows:

At December 31 (in millions of Euros)	2008	2007	Variation	Variation (%)
Operating profit before depreciation and amortization (EBITDA)	14,240	15,210	(970)	-6.4
Cancellation of non-monetary items included in EBITDA (1)	(1,399)	(1,584)	185	
Change in net working capital (1)	(2,511)	(269)	(2,242)	
Other items <sup>(2)</sup>	30	23	7	
Net cash flow from operations	10,360	13,380	(3,020)	-22.6
Net operating investments (net CAPEX less disposals)	(9,489)	(7,261)	(2,228)	
Net financial expenses disbursed	(1,068)	(921)	(147)	
Income taxes paid	(1,720)	(2,237)	517	
Free cash flow	(1,917)	2,961	(4,878)	NS
Dedicated assets	(1,785)	(2,397)	612	
Net financial investments	(4,305)	(237)	(4,068)	
Dividends paid	(2,528)	(3,260)	732	
Other changes (3)	479	621	(142)	
(Increase)/Decrease in net indebtedness, excluding the impact of changes in scope of consolidation and exchange rates	(10,056)	(2,312)	(7,744)	NS
Effect of change in scope of consolidation	138	198	(60)	
Effect of change in exchange rates	1,473	622	851	
Effect of other non-monetary changes (4)	238	155	83	
(Increase)/Decrease in net indebtedness	(8,207)	(1,337)	(6,870)	NS
Net indebtedness at beginning of period	16,269	14,932		
Net indebtedness at end of period	24,476	16,269		

<sup>(1)</sup> After reclassification of the effects of the EDF-AREVA agreement which has no net impact on net cash flow from operations.

The Group's net indebtedness stood at €24,476 million at December 31, 2008, up from €16,269 million at December 31, 2007, an increase of €8,207 million over the year 2008.

The change in net indebtedness in 2008 results primarily from the negative free cash flow of -€1,917 million (against a positive €2,961 million in 2007), which reflects the growth of over 29% in the Group's operating investment program (+€2,241 million (1) between 2007 and 2008) and the increase in working capital (+€2,511 million).

Allocations to dedicated assets amounted to €1,785 million.

The lower level of allocations of dedicated assets (€2,397 million in 2007) results from the Group's decision to suspend allocations temporarily from September 2008 in view of developments on the financial markets (for more details see section 9.10.1.6, "Management of financial risk on EDF's dedicated asset portfolio").

<sup>(2)</sup> Mainly corresponds to dividends received from companies accounted for under the equity method.

<sup>(3)</sup> Mainly corresponds to investments in concession assets, investment subsidies and a capital increase subscribed by minority shareholders.

<sup>(4)</sup> Mainly corresponds to changes in fair value and accounting reclassifications affecting components of net indebtedness.

<sup>1</sup> Gross operating investments before disposals.

Net financial investments stood at €4,305 million. These mostly related to development of EDF's nuclear businesses outside France, principally in the United Kingdom with the acquisition of British Energy (26.5% before dilution) for €2,679 million, and the US with acquisition of Constellation Energy Group for €412 million, plus payment of €854 million in 2008 for the future planned acquisition of 49.99% of its nuclear assets.

Dividends paid by EDF in 2008 amounted to €2,528 million, comprising the balance of the 2007 dividend of €1,273 million and an interim dividend of €1,164 million paid out in late 2008. Dividends paid out in 2007 totaled €3,260 million, which comprised the entire dividend for 2006 and the first interim dividend in respect of 2007 (€1,057 million).

Effects of changes in exchange rates (notably the fall in the pound sterling against the Euro) and to a lesser extent changes in the scope of consolidation reduced the Group's net indebtedness by €1,611 million.

## 9.9.3 Net indebtedness by company

Changes in the contribution to net indebtedness by each subsidiary are shown below:

Year ended December 31 (in millions of Euros)	2008	2007	Variation	Variation (%)
EDF SA and other related subsidiaries (1)	11,450	6,087	5,363	88.1
EDF Energy	7,437	5,890	1,547	26.3
EnBW	1,449	1,476	(27)	-1.9
Edison (2)	1,487	1,381	106	7.7
EDF Énergies Nouvelles	1,333	639	694	108.9
Other subsidiaries	1,320	762	558	73.2
Total	24,476	16,235	8,241	50.8
Net indebtedness of companies disclosed in non-current liabilities related to assets classified as held for sale	0	34	(34)	NS
GROUP TOTAL	24,476	16,269	8,207	50.4

<sup>(1)</sup> ERDF, RTE, PEI, EDF International and EDF Investissement Groupe.

The rise in indebtedness principally concerns EDF SA and related subsidiaries, EDF Energy and the Other subsidiaries.

At EDF SA and related subsidiaries, the 14% increase in capital expenditure (including the EPR, new fossil-fired generation capacities, and asset maintenance, etc.), the significant rise in working capital (margin calls as part of the trading activity), the cash allocations to dedicated assets and operations associated with the acquisition of Constellation Energy Group all contributed to the higher level of indebtedness.

At EDF Energy, the large increase in indebtedness is primarily explained by the first phase of acquisition of British Energy (a 26.5% investment before dilution) by a wholly-owned subsidiary of EDF Energy. Excluding this effect, EDF Energy's net indebtedness was reduced thanks to the favorable foreign exchange effect of the Euro's rise in value.

At EnBW, net indebtedness was practically stable due to the free cash flow generated and the low investments in external growth.

At Edison, indebtedness was affected by the increase in capital expenditure.

At EDF Énergies Nouvelles, development of wind farms and photovoltaic solar plants had a major impact on indebtedness.

The rise in indebtedness of Other subsidiaries was mostly concentrated in Dalkia International, and essentially resulted from development of these entities.

<sup>(2)</sup> Edison alone, excluding its holding companies.

9.10

# Management and control of market risks

## 9.10.1 Management and control of financial risks

This chapter sets forth the Group's policies and principles for management of financial risks (liquidity, interest rate, foreign exchange rate, equity and counterparty risks), defined in the Financial Management Framework and the Group counterparty risk management policy introduced by EDF. These principles apply only to EDF and operationally controlled subsidiaries (i.e. entities other than Edison, EnBW and Dalkia) or subsidiaries that do not benefit by law from specific guarantees of independent management (RTE EDF Transport and EDF Réseau Distribution France-ERDF). In compliance with IFRS 7, the following paragraphs include information on the nature of risks resulting from financial instruments, based on analyses of sensitivities and credit (counterparty) risks.

In view of the Group's international development, a dedicated body was set up in 2002 – the Financial Risks Control Division (Département Contrôle des Risques Financiers – "DCRF") - to control financial risks at Group level by ensuring correct application of the principles of the Financial Management Framework. This body also has the task of carrying out a second-level check (methodology and organization) of EDF and operationally controlled group subsidiaries, and an operational verification of financing activities at parent company level. Since 2008, the DCRF has reported to the Group's Risk Control division.

The DCRF issues daily reports of risk indicators relevant to activities in EDF's trading room.

Regular internal audits are carried out to ensure controls are effectively applied.

## 9.10.1.1 LIQUIDITY POSITION AND MANAGEMENT OF LIQUIDITY **RISKS**

## LIQUIDITY POSITION

At December 31, 2008, the Group's liquidities totaled €12,594 million and available credit lines amounted to €21,388 million. The Group also has access to financial resources through short-term issues and bond issue programs.

In 2009, the Group's scheduled debt repayments will total €12,337 million, including €1,998 million of bonds.

At December 31, 2008, no Group company was in default on any borrowing.

#### MANAGEMENT OF LIQUIDITY RISKS

As part of its policy to manage liquidity, finance its operating investment and external growth program and reinforce long-term debt, the Group undertook bond issues during 2008 (for details see section note 5 to the consolidated financial statements at December 31, 2008 "Other major events and transactions"). These bonds were issued by EDF (in amounts of €5,300 million, CHF 1,350 million, £900 million and 40,000 million yen), by RTE EDF Transport (in the amount of €2,250 million) and EnBW (in the amount of €1,500 million).

The average maturity of consolidated debt was thus reduced to 5.3 years at December 31, 2008, compared to 5.4 years at December 31, 2007, and EDF debt now has average maturity of 5.5 years compared to 4.6 years at December 31, 2007.

At December 31, 2008, the residual maturities of financial liabilities (including interest payments), are as follows under IAS 39:

	Long-term	Short-term	Hedging instruments (1)		Trading (1)	Total
(in millions of Euros)	debt	debt	Interest rate swaps	Currency swaps		
Less than one year	5,450	8,014	30	93	3,232	16,819
From one to five years	14,074	201	93	197		14,565
More than five years	20,311	81	92	33		20,517
TOTAL	39,835	8,296	215	323	3,232	50,191

(1) Data concerning hedging instruments include assets and liabilities; data concerning trading correspond to liabilities.

In an environment marked by major liquidity tensions on the financial markets, the EDF group was able to meet its financing needs by conservative liquidity management, and obtained financing on satisfactory terms.

Four specific levers are used to manage the Group's liquidity risk:

- the Group's cash pooling system, which centralizes cash management for controlled subsidiaries with the exception of RTE EDF Transport. The subsidiaries' cash balances are made available to EDF in return for interest, so as to optimize the Group's cash management and provide subsidiaries with a system that guarantees them market-equivalent financial terms:
- centralization of financing for controlled subsidiaries at the level of the Group's cash management department. EDF Energy and EDF Trading now have credit lines with EDF. The investment subsidiary EDF Investissements Groupe (EDF IG) set up in partnership with the bank Natixis Belgique Investissements provides long-term financing for EDF subsidiaries and invests in top-quality financial assets. EDF IG is proportionally consolidated by the group on a 85% basis;
- active management and diversification of financing sources used by the Group: the Group has access to short-term resources on various markets through programs for French commercial paper (billets de trésorerie), US commercial paper and Euro market commercial paper. For EDF, the ceilings for these programs are €6 billion for its French commercial paper, US\$10 billion for its US commercial paper and US\$1.5 billion for its Euro market commercial paper. EnBW, RTE EDF Transport and EDF Energy also have short-term programs for maximum amounts of €2 billion, €1 billion and £1 billion respectively;
- EDF also has regular access to bond markets through an annually updated EMTN (Euro Medium Term Note) program, registered with the market authorities in Luxembourg, France and other EU countries. The current ceiling for this program is €16 billion. EnBW, EDF Energy and Edison also have their own EMTN programs, with ceilings of €5 billion, £4 billion and €2 billion respectively.

In April 2008 RTE EDF Transport renewed its EMTN program, with a ceiling of €6 billion.

The table below sets forth the Group's principal borrowings at December 31, 2008:

Type of borrowing	Entity	Issue date	Maturity	Nominal amount (in millions of currency unit	Currency	Rate %
Bonds	EDF SA	01/1999	01/2009	1,996	EUR	5.0
Euro MTN	EDF SA	07/2000	10/2010	1,000	EUR	5.8
Euro MTN	EDF SA	10/2001	10/2016	1,100	EUR	5.5
Bonds	EDF SA	07/2001	07/2031	650	GBP	5.9
Bonds	EnBW	02/2002	02/2012	1,000	EUR	5.9
Euro MTN	EDF SA	02/2003	02/2033	850	EUR	5.6
Bonds	TDE	09/2005	09/2012	1,200	EUR	Euribor 3M
Bonds	RTE	09/2006	09/2016	1,000	EUR	4.1
Bonds	Edison	02/2007	12/2011	900	EUR	Euribor 1M
Euro MTN	EDF SA	02/2008	02/2018	1,500	EUR	5.0
Euro MTN	EDF SA	05/2008	05/2014	600	EUR	5.0
Euro MTN	EDF SA	05/2008	05/2020	1,200	EUR	5.4
Bonds	RTE	06/2008	05/2015	1,250	EUR	4.9
Euro MTN	EDF SA	07/2008	07/2013	40,000	JPY	JPY3M
Bonds	RTE	08/2008	08/2018	1,000	EUR	5.1
Euro MTN	EDF SA	11/2008	01/2013	2,000	EUR	5.6
Bonds	EnBW	11/2008	11/2013	750	EUR	6.0
Bonds	EnBW	11/2008	11/2018	750	EUR	6.9
Euro MTN	EDF SA	11/2008	12/2013	1,000	CHF	3.4
Euro MTN	EDF SA	12/2008	12/2013	350	CHF	3.4
Euro MTN	EDF SA	12/2008	12/2022	400	GBP	6.9

The entities with syndicated loan facilities at December 31, 2008 are EDF, EnBW, Edison and RTE EDF Transport:

- EDF has a syndicated loan facility for €6 billion, valid until March 2012. This amount comprises a €2 billion swingline available for same-day drawing. This facility is not conditional on maintenance of ratios or a given credit rating, and no drawings had been made on this facility at December 31, 2008;
- EnBW's syndicated loan facility valid until May 2012 comprises two tranches: one (tranche A) of €1 billion with a one-year term, with an option for renewal and drawing facility upon expiry at the lender's initiative, and

another (tranche B) of €58 million valid until October 2010 and €1,442 million valid until May 2012. No drawings had been made on this credit facility at December 31, 2008;

- Edison's syndicated loan for €1.5 billion is valid until April 2013. One €150 million drawing was made on it at December 24, 2008 for a one-month period;
- RTE EDF Transport's syndicated loan consists of one tranche of €1 billion valid until May 2013, comprising a €300 million swingline. No drawings had been made on this credit facility at December 31, 2008.

## Operating and Financial Review

EDF also contracted a syndicated loan of £11 billion on October 23, 2008, with a view to financing the acquisition of British Energy. This loan comprises two tranches:

- one tranche of £5.5 billion over 364 days, with a 1-year extension option;
- one tranche of £5.5 billion over three years.

No drawings had been made on this syndicated loan at December 31, 2008.

EDF intends to refinance this syndicated loan on the capital markets, chiefly through bonds. The bond issues of November and December 2008 partly contribute to repayment of the loan, and further issues were undertaken in January 2009:

- two bonds were issued on January 21, 2009: a 6-year bond totaling €2 billion (coupon of 5.125%) and a 12-year bond totaling €2 billion (coupon of 6.25%);
- a \$5 billion bond was issued on the US market on January 23, 2009, comprising three tranches: a 5-year \$1.25 billion tranche with coupon of 5.50%, a 10-year \$2 billion tranche with coupon of 6.50%, and a 30-year \$1.75 billion tranche with coupon of 6.95%.

#### 9.10.1.2 CREDIT RATINGS

The financial ratings agencies Standard & Poor's, Moody's and Fitch Ratings attributed the following long-term and short-term ratings to EDF group entities at December 31, 2008:

Company	Agency	Long-term rating	Short-term rating
	Standard & Poor's	AA-, stable outlook	A-1+
EDF	Moody's	Aa1, stable outlook	P-1
	Fitch Ratings	AA-, stable outlook	F1+
RTE EDF Transport	Standard & Poor's	AA-, stable outlook	A-1+
EDF Trading	Moody's	A3, stable outlook	N/A
	Standard & Poor's	A, negative outlook	A-1
EDF Energy	Moody's	A3, negative outlook	P-2
	Fitch Ratings	A-, stable outlook	F2
	Standard & Poor's	BBB+, stable outlook	A-2
Edison SpA	Moody's	Baa2, stable outlook	N/A
	Fitch Ratings	BBB+, stable outlook	F2
F D\A/	Standard & Poor's	A-, stable outlook	A-2
EnBW	Moody's	A2, stable outlook	P-1

In early 2009 following the announcement of effective acquisition of British Energy, the ratings agencies revised the long-term and short-term ratings for EDF downwards as follows:

Agency	Long-term rating	Short-term rating	Date
Standard & Poor's	A+, negative outlook	A-1	January 12, 2009
Moody's	Aa3, stable outlook	P-1	January 14, 2009
Fitch Ratings	A+. stable outlook	F1	January 7. 2009

#### 9.10.1.3 MANAGEMENT OF FOREIGN EXCHANGE RATE RISK

Due to the diversification of its activities and geographical locations, the Group is exposed to the risk of exchange rate fluctuations, which may have an impact on the translation differences affecting balance sheet items, Group financial expenses, equity and net income.

To limit exposure to foreign exchange risks, the Group has introduced the following management principles:

- local currency financing:
- To the extent possible given the local financial markets' capacities, each entity finances its activities in its own accounting currency. When financing is contracted in other currencies, derivatives may be used to limit foreign exchange risks.
- · hedging of net assets:

The net assets of subsidiaries located outside the Euro zone expose the Group to a foreign exchange risk. The foreign exchange risk in the consolidated balance sheet is managed either by matching with liabilities for acquisitions in the same currency, or by market hedging involving use of financial derivatives.

If no hedging instruments are available, or if hedging costs are prohibitive, the risk on open foreign exchange positions is monitored by sensitivity calculations.

• hedging of transactions in foreign currencies:

In general, the operating cash flows of EDF and its subsidiaries are in the relevant local currencies, with the exception of flows related to fuel purchases which are primarily in US dollars, and certain flows related to purchases of equipment, which concern lower amounts. EDF and the main subsidiaries concerned by foreign exchange risks (EDF Energy, Edison, EnBW, EDF Énergies Nouvelles) hedge firm or highly probable commitments related to these future cash flows.

After taking into account the financing and foreign exchange risk hedging policy, the Group's gross debt at December 31, 2008 breaks down as follows by currency after hedging as defined by IFRS: 66% in Euros, 23% in pounds sterling and 4% in US dollars. The balance of 7% includes the Swiss franc, the Hungarian forint, the Polish zloty, the Brazilian real and the Japanese yen.

## Gross debt structure at December 31, 2008, by currency, before and after hedging

December 31, 2008 (in millions of Euros)	Initial debt structure	Impact of hedging instruments (1)	Debt structure after hedges	% of debt
EUR	28,326	(3,499)	24,827	66
USD	2,273	(692)	1,581	4
GBP	4,152	4,225	8,377	23
Other currencies	2,700	(34)	2,666	7
TOTAL DEBT	37,451		37,451	100

<sup>(1)</sup> Hedges of liabilities and net assets of foreign subsidiaries, and USD/GBP swaps designated as economic hedges.

The table below presents the impact of an unfavorable variation in exchange rates on the Group's gross debt at December 31, 2008. Sensitivity to foreign exchange risks remains stable overall compared to 2007.

## Sensitivity of the Group's gross debt to foreign exchange rate risks

December 31, 2008	Debt after hedging instruments converted	Impact of a 10% unfavorable variation	Debt after a 10% unfavorable variation	Impact on equity
(in millions of Euros)	into Euros	in exchange rates	in exchange rate	
EUR	24,827	-	24,827	
USD	1,581	158	1,739	-
GBP	8,377	838	9,215	97
Other currencies	2,666	267	2,933	181
TOTAL	37,451	1,263	38,714	278

The table below sets forth the foreign exchange position relating to net non-operating investments in foreign currency of the Group's principal subsidiaries at December 31, 2008.

## Net asset position

December 31, 2008 (in millions of currency units)	Assets	Bonds	Derivatives	Net position after hedging (assets)
USD	733	-	230	503
CHF (Switzerland)	1,357	1,300	-	57
HUF (Hungary)	83,090	-	57,786	25,304
PLN (Poland)	1,666	-	1,313	353
GBP (United Kingdom)	3,715	1,550	1,295	870
BRL (Brazil)	518	-	-	518
SKK (Slovakia)	8,191	-	-	8,191
CNY (China)	627	-	-	627

The assets in the above table are the net assets of the Group's foreign subsidiaries in foreign currencies, adjusted for changes in the fair value of cash flow hedges and available-for-sale financial assets recorded in equity, and changes in the fair value of financial instruments recorded in income.

The following table sets forth the risk of foreign exchange loss in equity on the overall net position relating to the net non-operating investments in foreign currencies of the Group's principal subsidiaries at December 31,

2008, assuming unfavorable, uniform exchange rate variations of 10% against the Euro. Net positions are converted at the closing rate and impacts are reported in absolute value.

At December 31, 2008, net positions in USD were higher than in 2007 due to EDF's development in nuclear activities in the United States and the United Kingdom.

## Sensitivity of net assets to exchange rate risks

		12.31.2008			12.31.2007	
(in millions of Euros)	Net position in currency	Net position after management, converted into Euro	Impact of a 10% variation in exchange s rates	Net position in currency	Net position after management, converted into Euros	Impact of a 10% variation in exchange rates
USD	503	361	36	405	275	28
CHF (Switzerland)	57	38	4	275	166	17
HUF (Hungary)	25,304	95	10	17,075	67	7
PLN (Poland)	353	85	9	368	102	10
GBP (United Kingdom)	870	913	91	711	970	97
BRL (Brazil)	518	160	16	609	235	23
SKK (Slovakia)	8,191	272	27	7,948	237	24
CNY (China)	627	66	7	676	64	6

The foreign exchange risk on available-for-sale securities is mostly concentrated in EDF SA's dedicated asset portfolio, which is discussed in section 9.10.1.6., "Management of financial risk on EDF's dedicated asset portfolio".

The foreign exchange risk associated with short-term investments and operating liabilities in foreign currencies was not significant for the Group at December 31, 2008.

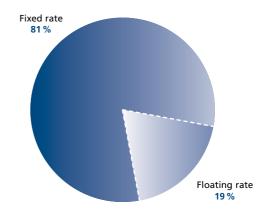
#### 9.10.1.4 MANAGEMENT OF INTEREST RATE RISK

The Group's exposure to interest rate fluctuations covers two types of risk: a risk of change in the value of fixed-rate financial assets and liabilities, and a risk of change in the cash flows related to floating-rate financial assets and liabilities.

To limit exposure to interest rate risk, the Group (apart from entities it does not control operationally, notably Edison and EnBW) fixes principles as part of its general risk management policy, designed to limit the risk of change in the value of assets invested or possible increases in financial expenses.

EDF therefore uses dynamic allocation between fixed and floating rates according to expected market fluctuations in interest rates. This allocation may involve the use of interest rate derivatives for hedging purposes.

The Group's debt after hedging instruments at December 31, 2008 was structured as follows: 81% of debt bore interest at fixed rates and 19% at floating rates.



A 1% uniform rise in interest rates would generate approximately a €70 million increase in financial expenses at December 31, 2008, based on gross floating-rate debt after hedging under IFRS.

The average coupon on Group debt (weighted interest rate on outstanding amounts) was 4.7% in 2008.

The table below sets forth the structure of Group debt and the impact of a 1% variation in interest rates at December 31, 2008. The impact of interest rate fluctuations remains stable compared to 2007.

## Group debt structure and sensitivity to interest rates

December 31, 2008 (in millions of Euros)	Initial debt structure	Impact of hedging instruments	Debt structure after hedges	Impact of a 1% variation in interest rates
Fixed rate	29,680	739	30,419	-
Floating rate	7,771	(739)	7,032	70
TOTAL BORROWINGS	37,451		37,451	70

Interest rate variations on fixed-rate debt have no accounting impact.

The table below presents the interest rate risk on floating-rate bonds and negotiable debt securities at EDF SA, and their sensitivity in net income. As fixed-rate negotiable debt securities and bonds are mainly held as part of the dedicated asset portfolio, a detailed sensitivity analysis is provided in section 9.10.1.6.

#### Sensitivity of floating-rate securities to interest rate risks

December 31, 2008	Euro	Impact of a 1% variation	Value after a 1%
(in millions of Euros)	value	in interest rates	variation in interest rates
FLOATING-RATE SECURITIES	1,472	147	1,325

## 9.10.1.5 MANAGEMENT OF EQUITY RISKS

The equity risk is concentrated in the following areas:

#### · coverage of EDF's nuclear obligations

Analysis of the equity risk is presented in section 9.10.1.6, ("Management of financial risk on EDF's dedicated asset portfolio");

## coverage of EDF and EDF Energy's employee benefit commitments

- assets covering EDF's employee benefit liabilities are partly invested on the international and European equities markets. Market trends therefore affect the value of these assets, and a severe downturn in equity prices could lead EDF to recognize actuarial losses.
- 24% of the assets covering EDF's employee benefit liabilities were invested in equities at December 31, 2008. The target level was 30.7%,
- at December 31, 2008, the two pension funds set up by EDF Energy (EDF Energy Pension Scheme and EDF Energy Group Electricity Supply Pension Scheme) were invested to the extent of 47% in equities, representing an amount of £1,021 million of equities;

### EnBW's reserved funds

EnBW is exposed to equity risks in the management of its reserved funds intended to cover its nuclear commitments and employee benefit obligations;

## EDF's long-term cash management

At December 31, 2008, equity-linked investments included in long-term cash management investments by EDF SA totaled €450 million (3.6% of total liquidities), with estimated volatility of 10.46% (annualized volatility of monthly returns observed over three years or over the longest period available). Applying this volatility to the value of equity assets at the same date, EDF estimates the annual volatility of the equities portion of cash investments at €47 million;

## direct investment securities

At December 31, 2008, EDF's investment in Veolia Environnement amounted to €406 million, with estimated volatility of 70.9% (annualized volatility of monthly returns observed over three years).

At December 31, 2008, EDF's investment in AREVA amounted to €300 million, with estimated volatility of 63.9% (annualized volatility of monthly returns observed over three years).

## 9.10.1.6 MANAGEMENT OF FINANCIAL RISK ON EDF'S DEDICATED ASSET PORTFOLIO

The dedicated assets have been built up progressively by EDF SA since 1999 to cover future dismantling expenses for the nuclear plants currently in operation, and the long-term storage of medium-level and high-level waste. Using a long-term management strategy, they are invested in equities and bonds in accordance with the allocation defined in 1999 and revised at the end of 2002 and 2005, pursuant to the governance principles for dedicated assets.

This dedicated asset portfolio, for which guiding principles were defined in the law of June 28, 2006 on sustainable management of radioactive materials and waste, is managed under the supervision of the Board of Directors and its Committees (Nuclear Commitments Monitoring Committee, Audit Committee).

The Nuclear Commitments Monitoring Committee (CSEN) is a specialized committee set up by EDF's Board of Directors when it updated its internal rules on January 25, 2007, in anticipation of the provisions of article 9 of the decree of February 23, 2007.

A Nuclear Commitment Financial Expertise Committee (CEFEN) exists to assist the company and its governance bodies on questions of association of assets and liabilities and asset management. The members of this committee are independent of EDF. They are selected for their skills and diversity of experience, particularly in the fields of asset/liability management, economic and financial research, and asset management.

The pace of portfolio development for dedicated assets was defined in September 2005 by EDF's Board of Directors and validated in April 2006 by the relevant ministry. The aim is to reach the level of the provisions concerned by the end of June 2011.

**Cash allocations** to dedicated assets in 2008 amounted to €1,785 million (see note 25.3 to the consolidated financial statements at December 31, 2008). In view of market conditions, these allocations have been suspended since September 2008. They will be resumed as soon as market conditions have stabilized, and adjustment will be made at that time for compliance with the regulatory requirement that liabilities should be covered by the portfolio by June 2011.

## Operating and Financial Review

Withdrawals totaling €266 million were made in 2008 (compared to €249 million in 2007) to cover EDF's cash needs to the extent of reversals of provisions for disbursements in connection with the related

The governance principles set forth the decision-making and control structure for management of dedicated assets. The principles governing the asset portfolio's structure, selection of financial managers, and the legal, accounting and tax structure of the funds are also defined.

Strategic asset allocation is based on an asset/liability review carried out to define the most appropriate portfolio model for the question of financing nuclear expenses. A benchmark index is also set for performance monitoring and control of the overall portfolio risk. Strategic allocation is regularly reviewed, in principle every three years unless circumstances require otherwise. Currently, assets are allocated 50% to international equities and 50% to bonds, although exposure may be different for reasons of tactical allocation. This flexibility was used to absorb the shock of the financial crisis, and the equities portion was reduced to 33.5% at December 31, 2008.

The portfolio contains two subportfolios, "equities" and "bonds", themselves divided into "secondary asset classes" or "pockets" that correspond to specific markets. A third subportfolio, "cash", is used to prepare and supply the disbursements related to amounts reversed from provisions for plants currently being dismantled.

**Tactical asset management** is organized around four main themes:

- supervision of exposure between the two classes, "equities" and "bonds";
- choice of exposure by geographical area;
- marginal investment in alternative vehicles to those used in the strategic allocation:
- selection of investment funds, aiming for diversification:
  - by style (growth securities, unlisted securities, high-return securities),
  - by capitalization (major stocks, medium and small stocks),
- by investment process (macroeconomic and sector-based approach, selection of securities on a "quantitative" basis, etc.),
- by investment vehicle (compliance with maximum investment ratios).

The allocation policy established by the Operational Management Committee (1) was developed on the basis of macro-economic prospects for each market and geographical area, and a review of market appreciation in different markets and market segments.

#### PORTFOLIO CONTENT AND PERFORMANCE

At December 31, 2008, the fair value of the dedicated asset portfolio was €8,655 million (€8,604 million at December 31, 2007).

#### Portfolio content under the classification from Article 4 of decree 2007-243 of February 23, 2007

Categories	12.31.20	008	12.31.2	12.31.2007		
(in millions of Euros)	Book value in EDF SA's corporate financial statements	Realizable value in the EDF consolidated financial statements	Book value in EDF SA's corporate financial statements	Realizable value in the EDF consolidated financial statements		
Bonds, receivables and other securities issued or guaranteed by an EU member state or OECD country, etc.	3,018	3,261	2,666	2,794		
2 Bonds, negotiable bills, etc issued by private sector entities	1,011	1,025	769	760		
3 Equities, shares and other securities traded on a recognized market, giving access to the capital of companies whose head offic is located in the territory of a EU member state or OECD country	e 75	75	233	470		
4 Shares or units in funds investing in assets referred to in 1 to 3	4,044	4,072	4,034	4,264		
5 Shares or units in funds investing principally in assets other than those referred to in 1 to 3.	160 3	222	208	314		
6 Real estate shares (shares in unlisted real estate companies)	None	None	None	None		
7 Deposits with BNP Paribas Securities Services	0.039	0.039	0.057	0.057		
Other payables and receivables (dividends receivable, management fees, etc.)	0	0	2	2		
TOTAL DEDICATED ASSETS	8,308	8,655	7,912	8,604		

<sup>1</sup> An internal committee for constant assessment, consultation and operational decision-making for dedicated asset management.

#### BREAKDOWN BY SUB-PORTFOLIO AND PERFORMANCE IN 2008

The breakdown of EDF's dedicated asset portfolio at December 31, 2008 and 2007 is as follows:

	Equities	Bonds	Monetary and
(in %)			equivalent investments
December 31, 2008	33.5%	66.5%	0.0%
December 31, 2007	48.5%	51.4%	0.1%

At December 31, 2008, the fair value of the dedicated asset portfolio was €8,655 million (€8,604 million at December 31, 2007).

	12.31.2008	12.31.2008	Performan	ce for 2008	Performan	ce for 2007
	Book value in EDF SA's corporate financial statements (in millions of Euros)	Realizable value in the EDF consolidated financial statements (in millions of Euros)	Portfolio	Benchmark index <sup>(1)</sup>	Portfolio	Benchmark index
Equities sub-portfolio	2,879	2,896	-38.9%	-37.6%	+3.2%	-1.7%
Bonds sub-portfolio	5,429	5,759	+5.9%	+9.4%	+2.2%	+1.8%
Cash sub-portfolio			+4.2%	+4.0%	+3.8%	+4.0%
TOTAL DEDICATED ASSET PORT	FOLIO 8,308	8,655	-14.9%	-16.7%	+3.0%	+0.2%

<sup>(1)</sup> Benchmark index: MSCI World for the equities sub-portfolio, Citigroup EGBI for the equities//bonds sub-portfolio, 50% MSCI World + 50% Citigroup EGBI for the total

In 2008, the dedicated asset portfolio suffered from the effects of the financial crisis, particularly the collapse of the international equities markets which resulted in a €1,786 million gross change in value, recorded in equity (€1,171 million net of tax). Nonetheless, the overall portfolio and its components held up slightly better against the market decline than its benchmark index.

The distribution of the portfolio between reserved funds and other financial instruments is also presented in note 25.3 to the consolidated financial statements at December 31, 2008.

EDF is exposed to equity risks and interest rate risks through its dedicated asset portfolio.

The market value of the "equities" sub-portfolio in EDF's dedicated asset portfolio was €2,896 million at December 31, 2008. The volatility of the equities sub-portfolio can be estimated on the basis of the volatility of the benchmark index, the MSCI World index, which at December 31, 2008 was 31.8% based on 52 weekly performances. It was 13.27% by the end of year 2007. Applying this volatility to the value of equity assets at the same date, the Group estimates the annual volatility of the equities portion of dedicated assets at €920 million.

By the end of year 2008, the sensitivity of the rate sub-portfolio (€5,759 million) was 4.29, i.e. a uniform 100 base point rise in interest rates would result in a €247 million decline in market value. This sensitivity was 4.41 in 2007.

#### 9.10.1.7 MANAGEMENT OF COUNTERPARTY RISK

Counterparty risk is defined as the total loss that the EDF group would sustain on its business and market transactions if a counterparty defaulted and failed to perform its contractual obligations.

The EDF group has a group counterparty risk management policy, which applies to all operationally controlled subsidiaries. This policy defines the organization of counterparty risk management and monitoring, and reporting procedures and circuits. It involves monthly consolidation of the exposures on financial and energy markets and twice-yearly consolidation for all activities at June 30 and December 31. Due to the financial crisis an additional consolidation was prepared in September 2008 and close supervision of Group counterparties was intensified (daily review of alerts, special cautionary measures for certain counterparties). The collapse of Lehman Brothers had only a marginal impact on EDF's positions.

Consolidation of the EDF group's counterparty risk at the end of September 2008 shows that the main counterparties for the Group's business overwhelmingly qualify as "investment grade". The corresponding exposure accounts for 86% of total exposure, stable compared to the consolidated risk for December 2007.

## 9.10.2 Management and control of energy market risks

## 9.10.2.1 FRAMEWORK FOR MANAGEMENT AND CONTROL OF ENERGY MARKET RISKS

In conjunction with the opening of the final customer market, development of the wholesale markets and on the international scene, the EDF group is exposed to price variations on the energy market which can have a significant impact on its financial statements.

Consequently, the Group has an "energy markets" risk policy (for electricity, gas, coal, oil products and CO<sub>2</sub> emission quotas) applicable to EDF and operationally controlled subsidiaries.

This policy aims to:

- define the general framework in which the various Group entities carry out their operational activities (energy generation, optimization and distribution), and their interaction with EDF Trading;
- consolidate the exposure of the various entities and subsidiaries controlled by the Group on the structured energy-related markets;
- implement a coordinated hedging policy at Group level.

At Edison and EnBW, which are not operationally controlled by EDF, the energy market risk policy and associated control process are reviewed by the companies' governance bodies.

#### 9.10.2.2 ORGANIZATION OF RISK CONTROL

The process for controlling energy market risks for entities operationally controlled by the Group is based on:

- a governance and market risk exposure measurement system, clearly separating management and risk control responsibilities;
- an express delegation to each entity, formalized by risk management mandates, establishing risk limits and other information. These mandates enable the TOP4 to set an annual Group risk profile consistent with the financial objectives, and thus direct operational management of energy market risks within the Group, generally over 3-year market horizons; and
- a specific control process, given its close interaction with the decisions made within the generation and supply businesses. This process involves Group management and is based on a risk indicator and measurement system incorporating escalation procedures in the event risk limits are exceeded.

The Group's exposure to energy market risks through operationally controlled subsidiaries is reported to the COMEX on a monthly basis. The control processes are regularly reappraised and audited.

## 9.10.2.3 OPERATIONAL PRINCIPLES FOR ENERGY MARKET RISK MANAGEMENT AND CONTROL

The principles for operational management of energy market risks are based on clearly-defined responsibilities for managing those risks, distinguishing between management of assets (generation and supply) and trading.

Managers of generation and supply assets are responsible for implementing a risk management strategy that minimizes the impact of energy market risks on their financial statements. However, they retain a residual risk that cannot be hedged on the market due to factors such as insufficient liquidity or market depth, uncertainty over volumes, etc.

For entities operationally controlled by the Group positions on the energy markets are taken predominantly by EDF Trading, the Group's trading entity, which operates on the markets on behalf of other group entities and for the purposes of its own trading activity. As such, EDF Trading is subject to a strict governance and control framework in line with current practices in trading companies.

EDF Trading trades on organized or OTC markets in derivatives such as futures, forwards, swaps and options (which may differ from accounting classifications applied at Group level). Its exposure on the energy markets is strictly controlled through daily limit monitoring by the subsidiary's management and by the entity in charge of energy market risk control at Group level. Automatic escalation procedures also exist to inform members of EDF Trading's Board of Directors if risk limits (value at risk limit) or loss limits (stop-loss limits) are breached.

Value At Risk (VaR) is a statistical measure of the company's potential maximum loss in market value on a portfolio of transactions in the event of unfavorable market movements, over a given time horizon and with a given confidence interval. EDF Trading assesses this VaR using the Monte Carlo method, which refers to historical volatilities and correlations estimated on the basis of market prices observed over the 40 previous trading days. The stop-loss limit stipulates the acceptable risk for the trading business by setting a maximum level of loss over a rolling three-month period. If the limit is exceeded, EDF Trading's Board of Directors takes appropriate action, which may include closing certain positions.

In 2008, EDF Trading's commitment on the markets was subject to a daily VaR limit of €32 million (with a daily confidence interval of 97.5%), and a stop-loss limit of €45 million. VaR fluctuated between €6.5 million and €30.5 million over the year, with an average of €14.8 million.

The table below shows the VaR and stop-loss limits for 2008 and 2007:

(in millions of Euros)	2008	2007
VaR limit (97.5% 1-day)	32	26
Stop-loss limit	45	35
Minimum VaR	6.5	4.9
Average VaR	14.8	11.1
Maximum VaR	30.5	27.6

Despite the very high volatility on the markets, the VaR and stop-loss limits were not exceeded in 2008 and EDF Trading's risks remained within the limits of the mandate from EDF at all times. The stop-loss has never been triggered since its introduction.

At EnBW (1), risk exposure is measured based on analyses of sensitivity to changes in market prices for each commodity. The table below shows the income statement and equity sensitivity for derivatives reported in the balance sheet at December 31, 2008:

(in millions of Euros)	2008		2007	
Electricity				
Price variation	+25%	-25%	+15%	-15%
Impact on income	-73.3	73.3	-65.8	65.8
Impact on equity	-10.8	10.8	-131.4	131.4
Coal				
Price variation	+45%	-45%	+15%	-15%
Impact on income	36.8	-36.8	7.9	-7.9
Impact on equity	252.9	-252.9	62.3	-62.3
Oil				
Price variation	+40%	-40%	+20%	-20%
Impact on income	16.6	-16.6	-2.6	+2.6
Natural gas				
Price variation	+30%	-30%	+25%	-25%
Impact on income	6	-6	6	-6
Emission certificates / quotas				
Price variation	+40%	-40%	+50%	-50%
Impact on income	37.3	-37.3	52	-52

At Edison (2), the governance model separates risk management and control from operational trading activities. From an operational point of view, Edison calculates its net exposure (3) based on its entire portfolio of contracts (industrial portfolio).

The level of economic capital associated with this net exposure is determined on the basis of Profit at Risk (PaR).

Edison thus measures the maximum potential decrease in the fair value of financial contracts hedging the risks on its industrial portfolio using a PaR (4) (with a confidence interval of 97.5%), resulting in

- 1 Source: EnBW annual report.
- 2 Source: Edison annual report.
- 3 Net exposure is the residual exposure after using all natural hedging options provide by vertical and horizontal integration of the various techniques.
- 4 Profit at Risk or PaR is a statistical measure of the maximum potential decline in the margin compared to budget for a given time horizon and confidence interval.

estimation of the risk at €197.4 million at December 31, 2008 in respect of 2009 (compared to €50.9 million at December 31, 2007 in respect of 2008). The difference is caused by the increase in financial hedging to cover the growth in fixed-price sales, and the higher volatility on the markets in 2008.

For trading activities, which concern a different portfolio distinct from the industrial portfolio, Edison set a limit of 95% VaR of €2.1 million for 2008, and a stop loss limit of €32.8 million. At December 31, 2008, VaR stood at 29% of the limit, with an average 49% for the year. Like the industrial portfolio, the trading portfolio was allocated an amount of economic capital. The limit on this economic capital takes account of the capital related to the portfolio's VaR and the risk capital estimated through stress tests on structured positions and non-liquid positions. In 2008, the economic capital limit for trading activities was set at €32.8 million, and it was utilized to the extent of 30% at December 31, 2008, with an average of 53% over the year.

For an analysis of the fair value of the Group's commodity hedging derivatives, see note 36.5 to the consolidated financial statements for the year ended December 31, 2008. For details of commodity contracts not classified as hedges by the Group, see note 37.3 to the same consolidated financial statements.

## 9.11 **Provisions**

The following table sets forth provisions (current and non-current) at December 31, 2008 and December 31, 2007:

(in millions of Euros)	12.31.2008	12.31.2007
Provisions for spent fuel management	8,806	11,011
Provisions for long-term radioactive waste management	6,732	6,444
Provisions for back-end nuclear cycle	15,538	17,455
Provisions for decommissioning	12,445	11,933
Provisions for last cores		1,721
rovisions for decommissioning and last cores		13,654
Provisions for post-employment benefits		12,675
Provisions for other long-term benefits		1,088
Provisions for employee benefits	13,719	13,763
Other provisions	4,738	3,862
TOTAL PROVISIONS	48,137	48,734

For details of the components of provisions, and changes in these provisions, see note 32 to the 2008 consolidated financial statements.

9.12

## Off balance sheet commitments (commitments given)

### 9.12.1 Operating, financing and investment commitments given

Operating, financing and investment commitments given by the Group were as follows at December 31, 2008:

		2	800	
(in millions of Euros)	Total	Maturity within one year	Maturity between one and five years	Maturity after five years
Operating commitments given	21,764	10,978	9,890	896
Satisfactory performance, completion and bid guarantees	1,451	541	828	82
Commitments related to order for operating items (1)	4,172	2,269	1,421	482
Commitments related to orders for fixed assets	11,339	5,655	5,513	171
Other operating commitments	4,802	2,513	2,128	161
Firm irrevocable purchase commitments	53,481	8,627	19,559	25,295
Operating lease commitments as lessee	2,593	611	1,442	540
Financing commitments given	3,159	848	1,196	1,115
Security interests on real property	2,166	148	1,162	856
Guarantees related to borrowings	429	166	30	233
Other financing commitments	564	534	4	26
Investment commitments	19,121	16,413	2,576	132
Investment commitments	18,783	16,195	2,472	116
Other financing commitments given	338	218	104	16

<sup>(1)</sup> Excluding commodities and energy.

Operating commitments given amounted to €21,764 million. In the course of its business, the Group provides contract performance guarantees, generally through the intermediary of banks. The Group has also given and received commitments jointly with third parties.

Operating contract performance commitments are described in note 11.3 of the notes to the consolidated financial statements for the fiscal year ended December 31, 2008.

Firm irrevocable purchase commitments (electricity, natural gas, other energies and commodities, nuclear fuels) amounted to €53,481 million at December 31, 2008. In the course of its generation and supply activities, the Group has entered into long-term contracts for purchases of electricity, gas, other energies and commodities, as well as nuclear fuels, for periods of up to 20 years. In almost all cases, these are reciprocal commitments, and the third parties concerned are under an obligation to supply or purchase the quantities specified in the contracts.

EDF has also entered into long-term purchase contracts with a certain number of electricity producers, by contributing to the financing of power plants. For further details on these commitments, see note 11.1 of the notes to the consolidated financial statements for the fiscal year ended December 31, 2008.

Operating lease commitments as lessee amounted to €2,593 million (see note 11.4 of the notes to the 2008 consolidated financial statements).

Financing commitments given, totaling €3,159 million, comprised security interests on assets, guarantees related to borrowings and other financing commitments.

For details, see note 34.5 of the notes to the consolidated financial statements at December 31, 2008.

Investment commitments include commitments for acquisition of equity investments and other investment commitments amounting to €19,121 million. For details, see note 25.5 of the notes to the consolidated financial statements at December 31, 2008.

## 9.12.2 Contractual obligations

The following table presents the Group's contractual obligations at December 31, 2008:

		20	800	
	Total	Maturity within	Maturity between	Maturity after
(in millions of Euros)		one year	one and five years	five years
Loans and financial liabilities at 12.31.2008 (1)	37,451	12,035	10,407	15,009
Financial lease commitments as lessee (2)	229	14	144	71
Contractual obligations recognized in the balance sheet	37,680	12,049	10,551	15,080
Satisfactory performance, completion and bid guarantees	1,451	541	828	82
Commitments related to orders for operating items	4,172	2,269	1,421	482
Commitments related to orders for fixed assets	11,339	5,655	5,513	171
Other operating commitments	4,802	2,513	2,128	161
Operating commitments given (3)	21,764	10,978	9,890	896
Firm irrevocable purchase commitments	53,481	8,627	19,559	25,295
Operating lease commitments as lessee (4)	2,593	611	1,442	540
Security interest in real property	2,166	148	1,162	856
Guarantees related to borrowings	429	166	30	233
Other financing commitments	564	534	4	26
Financing commitments given (5)	3,159	848	1,196	1,115
Investment commitments	18,783	16,195	2,472	116
Other financing commitments given	338	218	104	16
Investment commitments (6)	19,121	16,413	2,576	132
Off-balance sheet contractual obligations	100,118	37,477	34,663	27,978
TOTAL CONTRACTUAL OBLIGATIONS	137,798	49,526	45,214	43,058

<sup>(1)</sup> See note 34.2.2 to the 2008 consolidated financial statements.

The company is not aware of any significant off-balance sheet commitments at December 31, 2008 other than those reported in this chapter.

<sup>(2)</sup> See note 23.3 to the 2008 consolidated financial statements.

<sup>(3)</sup> See note 11.3.1 to the 2008 consolidated financial statements.

<sup>(4)</sup> See note 11.4 to the 2008 consolidated financial statements.

<sup>(5)</sup> See note 34.5 to the 2008 consolidated financial statements.

<sup>(6)</sup> See note 25.5 to the 2008 consolidated financial statements.

## 9.13

## **Subsequent events**

#### Atel

Under the terms of an agreement signed on December 18, 2008, EDF decided on January 15, 2009 to contribute to the new company Alpiq Holding SA its energy rights from the Emosson dam, valued at CHF720 million (€485 million), and CHF337 million (€227 million) in cash, through a capital increase (see note 25.5 to the consolidated financial statements).

#### **British Energy**

Subsequent events are mentioned in the section on the acquisition of British Energy (section 9.2.2.1.1 "Development of nuclear activities worldwide").

This purchase offer led to the following operations at the date of settlement and delivery on January 19, 2009, based on the acceptances received by January 5, 2009:

- a cash payment of £9,586 million;
- issuance of 389,982,701 CVR-linked Nuclear Power Notes maturing in 2019. These Notes will be listed from 2009 onwards. The Group assessed their fair value on the basis of the terms of the offer (74 pence per CVR).

#### **Bond** issues

On January 23, 2009, EDF issued two bonds in Euros. The first is a 6-year bond totaling €2 billion, with annual coupon of 5.125%. The second is a 12-year bond totaling €2 billion with annual coupon of 6.25%.

On January 26, 2009, EDF issued a \$5 billion bond on the US market in the form of a private placement reserved for institutional investors (issue governed by Rule 144A of the US Securities and Exchange Commission), in three tranches:

- a 5-year \$1.25 billion tranche with coupon of 5.50%;
- a 10-year \$2 billion tranche with coupon of 6.50%;
- a 30-year \$1.75 billion tranche with coupon of 6.95%.

These lines contribute to the financing of the Group's strategy and early repayment of the bank loan obtained to acquire British Energy, used in January 2009.

#### Construction of a second EPR

The French government confirmed on January 30, 2009, that it intends to construct a second EPR in a project led by EDF at Penly in Normandy.

EDF will present the project to its governing bodies.

EDF will work with other industrial groups on this second French EPR, particularly GDF SUEZ, through partnerships with entities such as Electrabel, which already took part in construction of the Chooz and Tricastin plants, and Enel, which has participated more recently in the future EPR project at Flamanville.

## **Capital resources and cash flows**

For information pertaining to capital resources and cash flows, see section 9 ("Cash flows and financial debt") of this Document de Référence. For information pertaining to the issuer's financing structure, see section 9.10.1.1 ("Liquidity position and management of liquidity risk") in this Document de Référence.

## Research and development, patents and licenses

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The Research and Development (R&D) Division of the EDF group has for main assignments to contribute to the improvement of the operational units' performance and to identify and prepare mid and long-term growth relays.

The validity of EDF group's renewed commitment relating to innovation and research is confirmed by the international and European context, characterized by:

• progressive depletion of fossil resources (oil, gas,etc.), issues of reducing emissions of CO<sub>2</sub> and global warming, environmental and water usage issues,

- worldwide development of research on replacement fuels and new sustainable methods of electricity generation, but also of the energetic efficiency and demand management,
- development of new information and communication technologies in technical systems,
- changes due to the opening to the competition of the energy markets.

## 11.1

## **Key figures**

In 2008, the total amount of EDF research and development expenditures booked in the income statement was €421 million, of which nearly €100 million for the protection of the environment: efficient uses of energy, research into renewable energy, the local impact of climate change, other studies seeking to reduce environmental issues (biodiversity, water quality, reduction of nuisances, etc.).

At the end of 2008, EDF's Research and Development (R&D) Division had approximately 2,000 employees.

## 11.2 R&D, an asset for the Group

### Contribute to the improvement of the operational units' performance

Every year, approximately three-quarters of EDF's R&D activities concerned projects directed by the operational divisions and by the Group's subsidiaries and are consequently meant to address certain specific issues.

Therefore, in the nuclear, hydropower and fossil-fired generation fields, EDF R&D shall, on the one hand, develop its tools and methods to improve the operational performances and safely optimize the operating life of the means of production, and on the other hand, anticipate the new environmental requirements.

The goals of the research program regarding renewable sources of energy are the identification of technological breakdowns capable of modifying the competitiveness ratio between the various sources of energy, and to contribute to the development of technologies considered more beneficial to the Group, such as solar and sea-based power.

As for transmission and distribution activities, EDF R&D acts as a support to integrate the new technologies dedicated to the performance of its businesses and to develop technical solutions aiming to increase the operating life of the materials and maximize the facilities' capacities to transmit energy.

EDF R&D also intervenes to support the Commercial Division to develop the tools and support methods for the commercial relationship, to develop solutions for the control of the demand of energy and energetic effectiveness of the uses for all the customers (residential customers, service sector, industrials) and the offers for the living habitat: integration of renewable sources of energy, "comfort" solutions, etc.

Finally R&D's projects devoted to upstream/downstream optimization aim to create the tools and models which increase the value of the Group's generation assets, to know better the functioning and to anticipate the evolution of markets (electricity, gas, emission allowances, etc.).

### Brighten up the future and prepare the growth relays

With the growing importance of the world energy issues – the end of fossil energies and the climate change impact on industrial activities – EDF R&D's commitment to the preparation of the future and of future growth relays, at the core of the Group's industrial project, was continued in 2008 in line with the actions carried out for several years.

#### Research and development, patents and licenses

For the period 2007-2009, these mid and long-term activities take the form of twelve "R&D Challenges" for EDF, focused on the following themes: our planet, our optimization, customers, generation, net-works and the digital stimulation, detailing the most important research issues for the EDF group and covering all of the Company's businesses.

In 2008, these twelve Challenges will mobilize several hundreds of researchers, many players in the operational Divisions of the Group, as well as French and Foreign partners of EDF R&D.

For the period 2007-2009, the twelve R&D Challenges of EDF are:

#### "OUR PLANET":

- Water: anticipate climate constraints on a shared resource;
- Improve the determination of the environmental impacts of our facilities.

#### "OUR OPTIMIZATION":

- Anticipate the new energy environment;
- Optimize EDF's generation on the market: restructure methods and tools;
- Find new flexibility sources between consumption, generation and storage.

#### "CUSTOMERS":

- Houses and buildings: develop technologies and services aiming to energetic efficiency;
- Industry: develop efficiency of old uses and new uses of electricity.

#### "GENERATION":

- Technically allow the exploitation of nuclear power plants up to 60 years;
- Use new technologies to obtain a higher performance operation;
- Innovate in renewable energies and storage.

#### "NETWORKS":

• Prepare the 2015's distribution (use of new information and communication technologies (NTIC) in the operation and management of networks, develop simulation tools to optimize their functioning, and technological innovations to favor the networks' performance, etc.).

#### "DIGITAL SIMULATION":

· Simulate to take decisions.

### EDF R&D is an integral player in French, European and world research

To carry out its research and development programs, EDF R&D concludes several partnerships in France, in Europe (in particular, in countries where the Group is present) and worldwide. These partnerships aim to maintain our expertise at the highest level worldwide in certain fields representing the heart of EDF's goals, to complete our internal fields of knowledge, and to create common laboratories with research organisms to gather a significant volume of knowledge around shared programs while sharing costs and risks of the upstream research.

These partnerships contribute to a high-standard performance of EDF's R&D research programs and also allow the development of shared projects, following national and European proposals. EDF also takes part in the partnerships created under the National Research Agency and the seventh European Commission's Framework program; and to an active participation in certain competition fields.

EDF has namely favored connections with the CEA and Areva in the nuclear field, taking the form of a tripartite agreement. In addition, EDF R&D is the first non-US partner of the American Research Institute EPRI (Electric Power Research Institute) for shared research programs, notably concerning the ageing of materials and intelligent networks; this partnership also allows the Group to cooperate with most of the nuclear operators in the world.

In 2008, the partnership approach pursued by EDF R&D has translated into:

- research work undertaken in two international common laboratories that are MAL (Materials Aging Institute) with TEPCO and EPRI on the durability of materials and the European center ECLEER with the Ecole des Mines and the Ecole Polytechnique Fédérale de Lausanne on energy efficiency in buildings and industry;
- the creation of a scientific interest group (GIS) in partnership with the *Ecole* Supérieure d'Electricité and the CNRS, on the topic of signal processing, with applications coming in favor of nuclear and networks;
- the creation between EDF and the Ecole Nationale des Ponts et Chaussées of a chair dedicated to training and research in fluid mechanics applied to the hydraulic and the environment;
- a partnership with IBM to develop the applications of numerical simulation and to model a number of complex processes of our industrial facilities, from nuclear power plants to tidal power, using the supercomputer with which EDF R&D has equipped itself.

#### 11.3 **Intellectual property policy**

Industrial property plays a major role in protecting the EDF group's technologies and know-how against competition, as well as in the capitalization of these assets through licensing.

#### **Patents**

At the end of 2008, EDF's portfolio included 390 patented inventions protected by 1,050 intellectual property titles in France and abroad.

#### **Trademarks**

"EDF" is a trademark registered in 62 countries. The Group's name is a fundamental part of its image and its assets. Thus, this trademark, the Internet domain names and the EDF logos are monitored constantly, in order to protect them against any fraudulent use which may harm the Group's image. The Group has also registered various other trademarks, in particular those related to the business of its various subsidiaries.

## Information on trends

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12.2	Development of electricity prices in France in January and February 2009	188

## **12.1**

### **Performance improvement:** "Excellence Opérationnelle" program

**12.3** Effects of the transition tariff system

Further to the cost reduction program "Altitude" carried on from 2005 to 2007, an "Excellence Opérationnelle" program is implemented from 2008 onwards. It aims at improving in a continuous way the Group's performance in all respects (from a financial, technical and corporate point of view):

- the "Excellence Opérationnelle" program aims not only at pursuing the control over the operating charges, but also at improving the gross margin (for instance by improving power plant availability and upstream/downstream optimization);
- it aims at increasing the EBITDA by improving the efficiency of operational process of generation (for instance shutdown of units and maintenance operations), marketing (for instance the processing of customers' demands), distribution (for instance the processing of electricity suppliers' demands and maintenance operations). Specific methodologies for the improvement of the operational processes, experienced in 2007 with promising results, have started to produce results in 2008. Their deployment should continue in 2009;
- regarding purchasing, methods also experienced in 2007, like pricing, sourcing or productivity partnership, are currently being implemented;
- in addition the program aims at speeding up synergies and reinforcing innovation.

It aims, for the period 2008-2010, at a gain of €1 billion on the Group's 2010 EBITDA as compared to the one of 2007. Two thirds of this gain should come from French-based activities and one third from international activities.

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The gain in 2008 is €285 million. It is in line with the expectations of the Group.

The cumulative gains expected in 2009 and 2010 as compared to 2007 EBITDA are respectively of €600 million and €1 billion.

In France, all of the Group's branches or subsidiaries have started their program. At the end of 2008, more than 300 projects have been initiated. The progress of the projects is now differentiated according to the complexity and depth of the transformations to be conducted in the operational process.

The Group's foreign subsidiaries have also started the implementation of their program, some of which are at the deployment stage; other project are at the structuring stage.

## 12.2

## Development of electricity prices in France in January and February 2009

Electricity prices of the day for the day after (spot) in the first two months of 2009 have been negotiated, in average and base, at €56.6/MWh in France (€-7.1 MWh compared with the first two months of 2008), €52.7 MWh in Germany (€-5/MWh) and €57.9/MWh in England (€-15.6/MWh). Temperatures during the first two months of 2009 have been particularly low and notably lower than those during the equivalent period in 2008, leading to a rise in French consumption, which is particularly sensitive to temperature, to historic levels (record for French consumption reached on January 7 at the peak of 19h with 92,400 MW). However, the decrease on spot prices is due to the collapse in fossil fuel prices and CO<sub>2</sub> quotas, and a high availability rate of the French fleet during consumption peaks.

Electricity forward prices during the first two months of 2009 were lower than those in the first months of 2008. The base annual contracts prices were negotiated at an average of €51.1/MWh in France (€-11.9/MWh), €50.2/MWh in Germany (€-12/MWh) and €51.7/MWh in England (€-22.4/MWh). They closed the month of February at €45.9, €43.4 and €46.3/MWh respectively.

This decrease in electricity forward prices in Europe is due to the fall in coal prices (-29% compared with the first two months of 2008 to \$83.6/t) oil prices (-52% to \$44.8/bl), phase 2 CO<sub>2</sub> quotas (-46% to €11.8/t) and to a lesser extent, gas prices (-5% to 54.2 p/therm). The coal and oil decrease was however slightly limited by the fall of the dollar in comparison to the euro (+12% to \$1.30/€1).

## 12.3

## **Effects of the transition tariff system**

Based upon information currently available to the Group, the EDF group estimated at the end of 2007 at around €1.7 billion the cumulative impact resulting from the application until mid 2009 of the transitory regulated tariff for market adjustment ("TaRTAM") on the Group's EBIDTA, this impact covering both:

- an estimate of EDF's contribution to the financing of the competitors compensation over the period valued at €718 million; and
- the negative consequences on Group sales and EBIDTA.

Based upon information available to the Group at the date of the filing of this Document de Référence, it estimates at around €1.2 billion the additional impact on EDF's contribution to the financing of the compensation awarded to competitors of the Law of August 4, 2008 extending until June 30, 2010 the application of the transitory regulated tariff for market adjustment. This impact is provisioned up to €1,195 million over fiscal year 2008.

This estimate remains sensitive to the assumptions considered as relevant and, in particular, those concerning the following parameters: electricity volumes concerned by compensation, integrated tariff evolutions in 2009, and electricity forward price in 2009 and 2010.

## Financial outlook

**13.1** Performance targets over the period 2006-2008

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13.2 2009 Outlook

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## **13.1**

## Performance targets over the period 2006-2008

The Group's objectives for the 2006-2008 period, expressed as organic growth and established on the basis of constant accounting principles and without taking into account the impact of the extension of the TaR-TAM by the Law of August 4, 2008, have been achieved:

- the average pluriannual increase of the EBITDA of 5.0% falls within the target range of 3% to 6%; and
- the average pluriannual increase of the Group share consolidated net income excluding non-recurring items of 13.4% is consistent with the objective of double-digit growth.

In the context of these objectives the EDF group has complied with its commitments relating to "Cessions d'actifs" and its efficiency program "Altitude" programs achieved in 2007:

- "Cessions d'actifs", with an impact of approximately €5.7 billion on the net consolidated financial indebtedness at the end of 2007 (which exceeds the €5 billion target);
- "Altitude" (see section 12.1 ("Performance improvement: Altitude and Excellence Opérationnelle programs") of the Group's 2007 Document de Référence).

## 13.2

## 2009 Outlook

2009 began with the uncertainties resulting from the economic and financial crisis

Against this backdrop, and after two major acquisitions in 2008, the Group has decided to give priority in 2009 to organic growth, the integration of acquisitions, the improvement of its operating and financial performances, and the reinforcement of its financial structure.

The Group's EBITDA should increase in 2009, thanks notably to the fullyear consolidation of British Energy, estimated at €1.5 billion for 2009 at the date of the filing of the present Document de Référence. The Group is aiming for a moderate EBITDA organic growth (excluding the impact on the 2008 fiscal year of the extension of the TaRTAM by the Law of August 4, 2008) in the current worsened economic backdrop. Its French businesses should benefit from the effect of Operational Excellence programme on operating expenses and the nuclear availability factor.

In addition, the Group also plans to pursue its substantial Capex efforts in generation and networks activities, in France and internationally.

Net income excluding non recurring items should not increase due to the continued investment program.

The Group has also set the target of reinforcing its financial structure in line with a high rating. In this respect, the Group plans to initiate as from this year an asset disposal program, which should reduce net financial debt by at least €5 billion by the end of 2010. This program, combined with the improvement in financial performances and operating cash flow, should, after the completion of the two acquisitions launched in 2008, contribute to gradually improve the Group's financial ratios and reinforce its financial structure

These objectives are likely to change or to be modified owing to uncertainties related in particular to the specific economic, financial, competitive, regulatory and climatic environment in 2009. In addition, the materialization of certain risks described in Chapter 4 ("Risk factors") of the present Document de Référence would have an impact on the Group's activities and its ability to achieve its objectives. The achievement of the objectives, moreover, relies on the successful implementation of the strategy presented in section 6.1 of the present Document de Référence. EDF therefore makes no undertaking or guarantee concerning the achievement of those objectives mentioned in the present chapter.

## Administrative, management, and supervisory bodies and senior management

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14.1

### **Board of Directors**

Since November 20, 2004, EDF has been a French société anonyme with a Board of Directors

### **14.1.1** Composition of the Board of Directors

The Company is managed by a Board of Directors consisting of 18 members in accordance with article 6 of the French Law n° 83-675 of July 26, 1983 relating to the democratization of the public sector.

Until the Shareholders' Meeting of February 14, 2006, the Board of Directors included 18 members: six persons chosen for their special skills, six representatives of the French State, appointed by decree and six representatives of the employees elected by them.

Since the Shareholders' Meeting of February 14, 2006, in accordance with the aforementioned law and the provisions of the amended decree-Law of October 30, 1935, the French State holding less than 90% of the share capital of EDF, the Board of Directors will continue to be comprised of 18 members:

- one third of whom are representatives of the employees elected by them: Ms. Marie-Catherine Daguerre and Mr. Jacky Chorin, Mr. Alexandre Grillat, Mr. Philippe Pesteil, Mr. Jean-Paul Rignac and Mr. Maxime Villota;
- and two thirds are persons appointed by the Shareholders' Meeting upon the proposal of the Board of Directors, subject to the representatives of the French State appointed by decree.

The French State has appointed six representatives by decree: Mr. Pierre-Marie Abadie, Mr. André Aurengo, Mr. Bruno Bézard, Mr. Gérard Errera, Mr. Yannick d'Escatha and Mr. Philippe Josse. Mr. Gérard Errera resigned from his position and was replaced by Mr. Pierre Sellal, appointed by decree of April 1, 2009.

The Shareholders' Meeting of February 14, 2006 has thus appointed six directors: Mr. Pierre Gadonneix, Mr. Frank E. Dangeard, Mr. Daniel Foundoulis, Mr. Claude Moreau, Mr. Henri Proglio and Mr. Louis Schweitzer who resigned from his position on May 10, 2008 and was replaced by Mr. Bruno Lafont, appointed by the shareholders' Meeting of May 20, 2008 for the remaining period until the renewal of the entire Board, that is until November 22, 2009 (included).

The duration of the mandate of members of the Board of Directors is five years. They remain in office until the first meeting of the renewed Board, in accordance with law. Therefore, the mandates of the above-mentioned members of the Board of Directors will expire at the end of November 2009. In case of a vacancy of the seat of a member of the Board of Directors for any reason whatsoever, his/her replacement will only hold office for the remaining duration of the term until the renewal of the full Board of Directors.

The Chief of the French State's Economic and Financial General Control Mission at EDF as well as the Secretary of the Central Works Council also attend the meetings of the Board of Directors with no right to vote.

Article 13-I of the by-laws ("statuts") of EDF provides that the Board of Directors may include, at most, two members of the French Parliament or holders of a local electoral mandate selected for their knowledge of regional, departmental or local aspects of energy issues.

The number of directors of more than 70 years of age may not exceed onethird of the directors in office.

#### 14.1.2 Personal information on members of the Board

#### COMPOSITION OF THE BOARD OF DIRECTORS AS OF THE DATE OF THE FILING OF THE PRESENT DOCUMENT DE RÉFÉRENCE

As of the date of the filing of the present Document de Référence, the directors of the Company were as follows:

Family name, first name, date of birth and primary responsibility in the company

**Duration of the mandate** in the Board of Directors of EDF Primary responsibility outside the company

DIDECTORS	<b>VDDUINTED</b>	BY THE CENEDAL	SHARFHOLDERS' MEETING	

Pierre Gadonneix Born on January 10, 1943

1<sup>st</sup> appointment (EPIC): Appointment as Director: Decree of September 8, 2004.

Chairman of the Board of Directors of Electra Association, of Transalpina di Energia, of the EDF Diversiterre Foundation and of the Group'action CO<sub>2</sub> Association.

**Chairman and Chief Executive Officer** 

Appointment as Chairman of the

Board of Directors: Decree of September 15, 2004. Chairman of the World Energy Council.

Member of the Board of Directors of the National Foundation of Political Science, European Foundation for Tomorrow's Energies the Association of French gas

1st appointment (SA): Appointment as Director: Decree of November 20, 2004.

Appointment as Chairman of the

Board of Directors: Decree of November 24, 2004 Member of Atomic Energy Committee, the Advisory Council of the Banque de France and the National Committee for Vital Importance Lines of Business (Comité National des secteurs d'activité d'importance vitale (CNSAIV)), High Comitee for transparency information on nuclear safety, of the Economic and Social Council.

Last appointment (SA): Appointment as Director:

General Meeting of February 14, 2006.

Appointment as Chairman of the Board of Directors:

Decree of February 15, 2006.

Director of Edison

Frank E. Dangeard

Born on February 25, 1958

1st appointment (SA):

Decree of November 20, 2004.

Managing partner of Harcourt

Director of Calyon,

Moser Baer, Sonae and Symantec. Director of Infogrammes Entertainement

2<sup>nd</sup> appointment (SA):

General Meeting of February 14, 2006.

**Daniel Foundoulis** 

Born on April 13, 1939

1st appointment (EPIC):

Decree of July 9, 1999.

Member of the National Consumers Council (CNC) – Member of the European Consumer Consultative Group in Brussels, representing

France.

2<sup>nd</sup> appointment (EPIC): Decree of September 8, 2004.

1st appointment (SA):

Decree of November 20, 2004.

Vice-chairman of the National Council of the

Secular Family Associations.

2<sup>nd</sup> appointment (SA):

General Meeting of February 14, 2006.

Head of ConsoFrance since January 2008.

Family name, first name, date of
birth and primary responsibility
in the company

#### **Duration of the mandate** in the Board of Directors of EDF

#### Primary responsibility outside the company

DIRECTORS APPOINTED BY THE GEN	DIRECTORS APPOINTED BY THE GENERAL SHAREHOLDERS' MEETING					
<b>Bruno Lafont</b> Born on June 8, 1956	1 <sup>st</sup> appointment (SA): General Meeting of May 20, 2008.	Chairman and Chief Executive Officer of Lafarge				
Claude Moreau Born on January 22, 1931	1 <sup>st</sup> appointment (SA): Decree of November 20, 2004.	Director of the competitive cluster mobility and advanced transport since 2006 (Pôle de compétitivité Mobilité et Transport Avancé				
	<i>2<sup>nd</sup> appointment (SA):</i> General Meeting of February 14, 2006.	(MTA)") Manager of SCI <i>La Maison de l'Industrie</i> .				
Henri Proglio Born on June 29, 1949	1st appointment (EPIC): Decree of September 8, 2004.	Within the group Veolia Environnement: Chairman and Chief executive officer of Veolia Environnement.				
	1st appointment (SA): Decree of November 20, 2004.	Chairman of the Supervisory Board (Conseil de surveillance) of Dalkia France, Chairman of the Board of Directors of Veolia Transport,				
	2 <sup>nd</sup> appointment (SA): General Meeting of February 14, 2006	Veolia Propreté and Veolia Water. Director of Dalkia International, <i>La Société des Eaux de Marseille</i> , Sarp Industries, Veolia Environmental Services Australia, Siram, Veolia Transport Australasia, Veolia Environmental Services UK, Veolia Environmental Services North America, Veolia Transport Northern Europe, Veolia Environment North America Operations. Member of the Supervisory Board (Conseil de surveillance) of A&B de Dalkia, Manager of Veolia Eau.				
		Outside the Veolia Environment Group: Member of the Supervisory Boards of Lagardère and Natixis. Director of CNP Assurances and Dassault Aviation. Observer in the Supervisory Board of <i>La Caisse Nationale des Caisses d'Epargne</i> .				
DIRECTORS REPRESENTING THE	FRENCH STATE					
<b>Pierre-Marie Abadie</b> Born on July 13, 1969	1 <sup>st</sup> appointment (SA): Decree of August 29, 2007.	Director of Energy at the <i>Direction générale de l'énergie</i> et du climat (DGEC) at the Ministry of Ecology, Energy Sustainable Development and Territory Planning ("Ministère de l'Ecologie, de l'Energie, du Développement Durable et de l'Aménagement du territoire")				
		Government commissioner to the National Agency for the Management of Radioactive Waste (ANDRA) and substitute to the government at Areva NC				
<b>André Aurengo</b> Born on April 4, 1949	1st appointment (EPIC): Decree of July 9, 1999.	University Professor, Head of the nuclear medicine department at the <i>Pitié Salpétrière</i> Hospital and biophysics professor				
	2 <sup>nd</sup> appointment (EPIC): Decree of September 8, 2004.	medical Faculty <i>Pierre et Marie Curie.</i> Member of the Medicine Academy.				
	1 <sup>st</sup> appointment (SA): Decree of November 20, 2004.	Member of the High Council for Public Health ("Hau Conseil de la Santé Publique")				

# Administrative, management, and supervisory bodies and senior management

Family name, first name, date of birth and primary responsibility in the company	Duration of the mandate in the Board of Directors of EDF	Primary responsibility outside the company
DIRECTORS REPRESENTING THE FRENCH	STATE	
<b>Bruno Bézard</b> Born on May 19, 1963	1 <sup>st</sup> appointment (EPIC): Decree of August 1, 2002.	General Manager of the French State Holdings Agency (APE) at the Ministry of the Economy, Industry and Employment.
	2 <sup>nd</sup> appointment (EPIC):	
	Decree of September 8, 2004.	Member of the Supervisory Board of Areva and of the Grand Port Maritime de Marseille.
	1 <sup>st</sup> appointment (SA):	
	Decree of November 20, 2004.	Director of Air France - KLM, France Telecom, Fonds Stratégique d'Investissement (FSI),
		La Poste, Dexia and Thalès.
Yannick d'Escatha	1 <sup>st</sup> appointment (EPIC):	Chairman of the National Center for Space Study (CNES).
Born on March 18, 1948	Decree of September 21, 1995.	
		Chairman of the Board of Directors of the Technology
	2 <sup>nd</sup> appointment (EPIC):	University of Troyes
	From the decree of July 9, 1999 to the	
	decree of February 23, 2000.	Member of the Technologies Academy.
		Permanent representative of the CNES at the Board of
	1 <sup>st</sup> appointment (SA): Decree of November 20, 2004.	Directors of Arianespace SA and Arianespace Participation.
		Director of RATP.
Philippe Josse	1st appointment (S.A.):	Director of the national Budget at the French
Born on September 23, 1960	Decree of April 12, 2006.	Ministry of the Budget, Public accounts and
	, , , , , ,	Public Service.
		Director of Air France-KLM and SNCF.
Pierre Sellal	1 <sup>st</sup> appointment (S.A.)	Ambassador of France.
Born on February 13, 1952	Decree of April 1, 2009.	General Secretary of Foreign and European
		Affairs Ministry as of April 14, 2009.

Family name, first name, date of birth and primary responsibility in the company

Maxime Villota

partnerships.

Born on November 5, 1959

Purchase policy coordinator at the Tricastin's

CNPE mission for finance and industrial

**Duration of the mandate** in the Board of Directors of EDF Primary responsibility outside the company

DIRECTORS REPRESENTING THE EMPLOYEE	S	
Jacky Chorin	1 <sup>st</sup> appointment (EPIC):	
Born on April 22, 1959	Election of May 6, 2004.	
Legal advisor.	Participated for the first time at the	
Project leader near the Human Resources	Board of Directors' meeting of	
Director of the Production Engineering	September 14, 2004.	
Department.	September 14, 2004.	
рерагинети.		
Marie-Catherine Daguerre	1st appointment (EPIC):	
Born on November 15, 1960	Election of May 6, 1999.	
Customer Advisor.	Participated for the first time at the	
Customer / turison	Board of Directors' meeting of	
	July 12, 1999.	
	Jay 12, 1999.	
	2 <sup>nd</sup> appointment (EPIC):	
	Elections of May 6, 2004.	
Alexandre Grillat	1 <sup>st</sup> appointment (EPIC):	
Born on December 8, 1971	Election of May 6, 2004.	
Engineer.	Participated for the first time to the	
Attaché to the Commercial Executive of	Board of Directors' meeting of	
Electricity of Strasbourg.	September 14, 2004.	
Philippe Pesteil	1 <sup>st</sup> appointment (EPIC):	
Born on September 1, 1957	Election of May 6, 2004.	
Engineer.	Participated for the first time at the	
Internal auditor to the General Technical	Board of Directors' meeting of	
Division.	September 14, 2004.	
	art (GA)	
Jean-Paul Rignac	1st appointment (SA):	
Born on May 13, 1962	Election of May 6, 2004.	
Engineer-Researcher in the Research and	Participated for the first time at the	
Development Division.	Board of Directors' meeting of	
•	· · · · · · · · · · · · · · · · · · ·	

November 7, 2007.

1<sup>st</sup> appointment (SA): Election of May 6, 2004.

December 13, 2006.

Participated for the first time at the

Board of Directors' meeting of

### Administrative, management, and supervisory bodies and senior management

#### PERSONAL INFORMATION RELATING TO THE DIRECTORS AS OF THE DATE OF THE PRESENT DOCUMENT DE RÉFÉRENCE

#### DIRECTORS APPOINTED BY THE GENERAL SHAREHOLDERS' **MEETING:**

Pierre Gadonneix. Born on January 10, 1943 in New York (United States of America), Mr. Gadonneix holds a Ph.D. in Business Economics from Harvard Business School, and is a graduate of the Ecole Polytechnique (1962), the Ecole Nationale Supérieure du Pétrole et des Moteurs, and in economic sciences. After founding an IT company (SEFI) and selling it in 1972 to a large industrial company, he became Director of the Industrial Development Institute (Institut de Développement Industriel (IDI)). In 1976 he was technical advisor in the cabinet of the Minister of Industry and Research. He was Director of the Metallurgical, Engineering and Electrical Industries within the Ministry of Industry (from 1978 to 1987), and Chief Executive Officer of Gaz de France (from 1987 to 1995) becoming Chairman of the Board in 1995. Pierre Gadonneix participated in EDF's Board of Directors from 1978 to 1987 as a Government's Assistant Commissioner. He was President of the French Energy Council for from 1993 to 1999. Chairman and Chief Executive Officer of EDF since 2004, Pierre Gadonneix is Chairman of the Board of Directors of the Electra Association, Transalpina di Energia, of the EDF diversiterre Foundation and of the Group'action CO<sub>2</sub> association. President of the World Energy Council, he is also a member of the Board of Directors of the National Foundation of Political Sciences, of the European Foundation for Tomorrow's Energies. He is also a member of the Atomic Energy Committee, of the Advisory Council of the Banque de France, of the National Committee for Vital Importance Lines of Business (Comité National des secteurs d'activité d'importance vitale (CNSAIV)), of the High Committee for transparency and information on nuclear safety, of the Economic and Social Council and of the French Gas Association. He has been director of Edison since 2005.

Frank E. Dangeard. Born on February 25, 1958 in Ottawa (Canada), Frank E. Dangeard is a graduate of Ecole des Hautes Etudes Commerciales (HEC), the Institut d'Etudes Politiques de Paris and Harvard Law School. He was a lawyer in the United States and London from 1986 to 1989, then Managing Director of the Warburg Bank and was appointed the Chairman of the Executive Board of SBC Warburg France in 1995. He joined the Thomson Multimedia Group in 1997 as Chief Officer and Vice-Chairman of the Board of Directors as of 1999. From September 2002 to September 2004, he was Senior Executive Vice-President of France Telecom. From September 2004 to March 2008, he has been the Chairman and Chief Executive Officer of Thomson. Frank E. Dangeard is Managing Partner of Harcourt and is a Director of Calyon (Credit Agricole Group), of Symantec (United States), of Sonae (Portugal) and of Moser Baer (India). He is also member of the Advisory Board of certain international companies. He is member of the Board of Directors of Infogrammes Entertainement since March 15, 2009. He has been Director of EDF since November 2004.

Daniel Foundoulis. Born on April 13, 1939 in Paris (France), Daniel Foundoulis was a laboratory technician in the maxillofacial sector and worked in various capacities in hospitals and then in offices. He created a company called Laboprodem (a dental prosthesis laboratory). He was a director of the National Consumption Institute (Institut National de la Consommation or "INC") and the European Consumer Association (Association Européenne des Consommateurs (AEC)) and a member of the High Council for Electricity and Gaz in representation of consumers (Conseil Supérieur de l'Electricité et du Gaz or "CSEG"). He is a member of European Consumer Consultative Group in Brussels (Groupe Consultatif Européen des Consommateurs à Bruxelles (ECCG)), as a representative of France and the General Secretary of the National Council of the Secular Family Associations (Secrétaire Général du Conseil National des Associations Familiales Laïques (CNAFAL)). He is also a member of the French National Consumer Council (Conseil National de la Consommation, or "CNC"). He has served as head of ConsoFrance, which coordinates 9 French consumer organizations since January 2008. He has been Director of EDF since July 1999.

Bruno Lafont. Born on June 8, 1956 in Boulogne-Billancourt (France), Bruno Lafont is graduate of Ecole des Hautes Etudes Commerciales (HEC 1977, Paris) and a former student of the Ecole Nationale d'Administration (ENA 1982, Paris). He began his career at Lafarge in 1983. In 1994 he was appointed Group Executive Vice President, Finance and joined the Group's Executive Committee. He then joins in 2003 the Executive Group Management Board as Chief Officer Deputy. He was appointed to the Group's Board of Directors on 25 May 2005 and became Chief Executive Officer on 1 January 2006. He has been the Chairman and Chief Executive Officer of Lafarge since May 2007. He has been Director of EDF since May 20,

Claude Moreau. Born on January 22, 1931 in Civray (France), Claude Moreau is a graduate of the Ecole Supérieure de Commerce de Poitiers and the Institut Financier de Gestion (Louis Pasteur promotion). He was Vice-Chairman of the Regional Council of Poitou-Charentes from 1986 to 2004, Chairman of the Center-West Analysis and Tests Institute (Institut d'analyses et d'essais du centre-ouest or "IANESCO") from 1990 to 1998 and local deputy of the National Center for the training of public agents (Centre national de formation des personnels territoriaux or 'CNFPT") from 1998 to 2004. He was a Chief Executive Officer of a publishing company where he founded the Scolavox publications, the Training Institute on Education and Environment (Institut de Formation à l'Education à l'Environnement, or "IFREE") and the Research Center on Electric and Hybrid Vehicles (Centre d'études et de recherche sur les véhicules électriques et hybrides or "CEREVEH"). He has been from 2004 to 2007, the Chairman of the Inter-ministry commission for clean and energy sparing vehicles (Commission Interministérielle Véhicules propres et économes en énergie or "CIVEPE"). Manager of the competitive cluster : mobility and advanced transport since 2006 (Pôle de compétitivité Mobilité et Transport Avancé (MTA)" and manager of SCI La Maison de l'Industrie. He has been Director of EDF since November 2004.

Henri Proglio. Born on June 29, 1949 in Antibes (France), Henri Proglio is a graduate of Ecole des Hautes Etudes Commerciales (HEC). He joined the Compagnie Générale des Eaux in 1972 and was appointed Chairman and Chief Executive Officer of CGEA in 1990. He was appointed Vice-Chairman of Vivendi Universal and Chairman and Chief Executive Officer of Vivendi Water in 1999 before becoming Chairman of the Executive Board of Veolia Environnement in 2000 and then Chairman and Chief Executive Officer in 2003. Within the Veolia Environment Group, Henri Proglio is Chairman of the Dalkia France's Supervisory Board (Conseil de surveillance), Chairman of the Board of Directors of Veolia Transport, Veolia Propreté and Veolia Water, Director of Dalkia International, of the company Eaux de Marseille, Sarp Industries, Veolia Environmental Services Australia, Veolia Transport Australia, Veolia Environmental Services UK, Siram, Veolia Transport Northern Europe, Veolia Environmental Services North America and Veolia Environment Operations North America; member of Dalkia's A&B Supervisory Boards; manager of Veolia Eau. Apart from the Veolia Environment Group, Henri Proglio is a member of the Supervisory Boards of Lagardère and Natixis; Director of CNP Assurances and of Dassault Aviation; censor at the Caisse Nationale des Caisses d'Epargne Supervisory Board. He has been Director of EDF since November 2004.

#### DIRECTORS REPRESENTING THE FRENCH STATE:

Pierre-Marie Abadie. Born on July 13, 1969 in Brest (France), Pierre-Marie Abadie is a graduate of the Ecole Polytechnique (1988), and the Ecole Nationale supérieure des mines de Paris (1993) and Mines chief engineer (2000). He has started his career as quality engineer in Peugeot Automobiles production center at Sochaux, then in Prague as engineer to the maintenance division of the company CSA (Air France). He has been chief of Industrial Environment Regional Department, deputy director of the Industry Regional department, Research and Environment department of Lorraine, then deputy of the department chief "Company Financing and Competititvity" before being chief of the department "Housing and Decentralized Authorities Financing" at the Treasury Division. Then, he has been consultant for the Industrial Affairs at Ministry of defence cabinet from May 2002 to May 2007. From July 2007 to July 2008, he has been Executive of Demand and of the Energetic Markets to the General Direction of Energy and Raw material Division (DGEMP). He has then been appointed Executive of the energy at the Energy and Climate Division at the Ministry of Ecology; energy, Development and territory Planning on July 2008. Pierre-Marie Abadie is Government commissioner to the National Agency for the Management of radioactive Waste (ANDRA) and substitute to the government commissioner at Areva NC. He has been Director of EDF since August 2007.

André Aurengo. Born on April 4, 1949 in Neuilly-sur-Seine (France), André Aurengo is a graduate of the Ecole Polytechnique, a former intern of the *Hôpitaux de Paris*, a Professor in medicine and a Doctor of Sciences. He is a member of the French Academy of Medicine. He heads the nuclear medicine department at the hospital Pitié-Salpêtrière, and is a professor in biophysics at the Medical School of Pierre et Marie Curie. Appointed in 1998, he participated in the Curien project on nuclear transparency. He has been the President of the French Society of Radiation Protection (Société Française de Radioprotection, or "SFRP") from 2005 to 2007. He is a member of High Council on Public Health. He has been Director of EDF since July 1999.

Bruno Bézard. Born on May 19, 1963 in Chauny (France), Bruno Bézard is a graduate of the Ecole Polytechnique and the Ecole Nationale d'Administration. French treasury official, he is currently General Manager of the French State Holdings Agency (Agence des Participations de l'Etat, or "APE") at the Ministry of Economy, Industry and Employment. He was also a Vice-Director of insurance in the French Treasury Department, Assistant Director in the cabinet of Mr. Christian Sautter at the Ministry of Economy, Finance and Industry, Vice-Chairman of the Club de Paris and then advisor for economic and financial affairs in the cabinet of the Prime Minister Lionel Jospin. Mr. Bézard was Chief of Holdings and Financing under the authority of the French Treasury Department, since July 2002 at the Ministry of Economy, Finance and Industry, prior to his appointment at the APE. Bruno Bézard is a member of the Supervisory Board of Areva and of Grand Port Maritime de Marseille, Director of Air France-KLM, France Telecom, La Poste, Thalès, of the Fonds Stratégique d'investissement and of Dexia. He has been Director of EDF since August 2002.

Yannick d'Escatha. Born on March 18, 1948 in Paris (France), Yannick d'Escatha is a graduate of the Ecole Polytechnique, an engineer from the Ecole des Mines, professor at the Ecole Polytechnique, the Paris National Mines School ("Ecole des Mines de Paris") and the National School for Advanced Technics ("Ecole Nationale Supérieure de Techniques Avancées"). Specialized researcher in ground, structural and fracture mechanics, in 1978 he was appointed Chief of the supervision of nuclear construction bureau where he was in charge of the technical control of the French State in the French electronuclear program. He was on temporary assignment in 1982 at the company Technicatome, a subsidiary of the French Atomic Energy Commission (CEA), specializing in nuclear engineering and notably in nuclear naval propulsion, and where he became Senior Executive Vice-President in 1987. He was appointed as Director of Advanced Technology Division at the CEA in 1990, deputy General Director in 1992 and General Director in 1995. In 1999, he was appointed as Assistant Director of CEA-Industrie. He was

appointed Deputy Chief Executive Officer of EDF in 2000. In 2003, he was appointed as Chairman of the Centre National d'Etudes Spatiales ("CNES"). He is a member of the Académie des Technologies, and Chairman of the Board of Directors of the *Université de Technologies* of Troyes, permanent representative for CNES at the Board of Directors of Arianespace SA and Arianespace Participation and Director of RATP. He has been Director of EDF since November 2004.

Philippe Josse. Born on September 23, 1960 in Saintes (France), Philippe Josse is a graduate from the *Institut d'Etudes Politiques de Paris* and from the Ecole Nationale d'Administration. He started his career as an administrator in the Senate, then continued at the Ministry of the Economy and Finance, where he worked, in particular, as a Deputy Director of the Cabinet of the Minister of the Budget and Budgetary Reform, and as a Deputy Director of the Cabinet of the Minister of the Economy, Finance and Industry. Philippe Josse was appointed Budget Director at the Ministry of the Budget, Public Accounts and Public Service on March 30, 2006. Philippe Josse is a Director of Air France - KLM and of SNCF. He has been Director of EDF since April 2006.

Pierre Sellal. Born on February 13, 1952 in Mulhouse (France), Pierre Sellal is a graduate of the Faculty of Law and Economic Sciences of Strasbourg and from the Ecole Nationale d'Administration ("André Malraux" class). He began his career as Secretary of Foreign Affairs to the Directorate of the United Nations from 1977 to 1980, then became Technical Advisor in the Office of the Minister of Foreign Trade (1980-1981). Adviser to the Permanent Representation of France to the European Communities in Brussels from 1981 to 1984, he then performs the functions of Head of International Relations at the Ministry of Industrial Redeployment and Foreign Trade (Oil directorate) until 1985. At that time, he was appointed Deputy Secretary General SGCI (Interministerial Committee for issues of European Economic Cooperation), a position he held until 1990. Member of the working group charged with developing a future outlook of all the consequences of introducing the European single market from 1988 to 1990, he became Minister-Counselor at the French Embassy in Rome in 1990, then-Minister Counselor, Deputy Permanent Representative of France to the European Union in Brussels from 1992 to 1997. In 1997, he was appointed Director of European Cooperation in the Ministry of Foreign Affairs before being appointed Director of Cabinet of Minister of Foreign Affairs from 1997 to 2002. Ambassador, Permanent Representative of France to the European Union in Brussels since 2002, he was awarded the title of Ambassador of France in November 2008. He is the Secretary General of the Ministry of Foreign and European Affairs as of April 14, 2009 and a Director of EDF since April 1, 2009.

#### DIRECTORS REPRESENTING THE EMPLOYEES:

Jacky Chorin. Born on April 22, 1959 in Caudebec en Caux (France), Jacky Chorin is a graduate of the Institut d'Etudes Politiques de Paris and has a doctorate in law. He began his career at EDF as a legal advisor in the central service of the Equipment Division in 1983. He currently fulfills functions within the Human Resources division of EDF's Generation-Engineering Division. He has been Director of EDF since September 2004, sponsored by CGT-FO.

Marie-Catherine Daguerre. Born on November 15, 1960 in Mont de Marsan (France), Marie-Catherine Daguerre spent the first part of her career in the administrative branch of EDF Gaz de France Distribution in Gironde from 1982 and then worked in customer relations. For two years she was a member of the Regional Economic and Social Council of Aquitaine and was an union representative in her unit, and then in the national division of Fédération CGT Mines Energie. She has been Director of EDF since July 1999, sponsored by CGT.

### Administrative, management, and supervisory bodies and senior management

Alexandre Grillat. Born on December 8, 1971 in Bethune (France), Alexandre Grillat is a graduate of the Ecole Supérieure d'Electricité and has an advanced degree in electrical engineering. He began his career at EDF in 1996 in EDF Gaz de France Distribution and has held various technical management, customer relations and sales positions in the EDF group, and then at the Strategy Division. He currently works in the office of the Sales Manager of Electrité de Strasbourg. He has been Director of EDF since September 2004, sponsored by CFE-CGC.

Philippe Pesteil. Born on September 1, 1957 in Saint-Merd-de-Lapleau (France), Philippe Pesteil is an engineering graduate of the Institut National des Sciences Appliquées (INSA) in Lyon. He joined EDF in 1982 where he has held different engineering positions. He is a member of the internal audit team in the general technical division of EDF in Grenoble. He has been Director of EDF since September 2004, sponsored by CFDT.

Jean-Paul Rignac. Born on May 13, 1962 in Rodez (France), Jean-Paul

Rignac has a doctorate of the Institut national polytechnique of Toulouse in the energy field. He is Engineer-Researcher in the Research and Development Division at the EDF Renardières Center since March 1991, and currently works on energy efficiency in the industrial buildings field. After having been for five years Secretary of the EDF Production joint committee Research and Development. He has been Director of EDF since November 2007 sponsored by CGT.

Maxime Villota. Born on November 25, 1959 in Joeuf (France), Maxime Villota started working at EDF in 1981 at the Dampierre en Burly plant, before joining Tricastin nuclear center for electricity generation in 1987. He is a member of the trade unions Fédération CGT Mines Energie. He heas been Director of EDF since December 2006, sponsored by CGT.

Annex C of this Document de Référence describes the mandates (excluding EDF and main functions) of the directors as well as those they held during the past 5 years.

## 14.2

### **General management**

### 14.2.1 Concurrent positions of Chairman and Chief Executive Officer of the **Board of Directors**

The Chairman of the Board of Directors, who holds the title of Chairman and Chief Executive Officer, is in charge of the management of the Company. He is appointed by decree upon a proposal of the Board of Directors.

Following the General Shareholders' Meeting of February 14, 2006, the Board of Directors suggested that the government would appoint Pierre Gadonneix as Chairman and Chief Executive Officer. That appointment was decided by a decree of February 15, 2006.

### 14.2.2 Duties of the Chairman and **Chief Executive Officer**

The Chairman and Chief Executive Officer organizes and supervises the work of the Board of Directors, for which he is accountable at the Shareholders' Meeting. He oversees the functioning of the bodies of the Company and, in particular, ensures that the directors are in a position to accomplish their mandates.

Subject to the specific legal provisions governing public sector companies, to the powers that the law expressly attributes to Shareholders' Meetings and to the powers the law specifically assigns to the Board of Directors, and within the scope of the Company's corporate purposes, the Chairman and Chief Executive Officer is entrusted with far-reaching powers to act on behalf of the Company in all circumstances.

Upon a proposal of the Chairman and Chief Executive Officer, the Board of Directors may appoint one or more individuals with the title of Chief Officer(s) to take on the task of assisting the Chairman and Chief Executive Officer. The maximum number of Chief Officers is set at five. The Board of Directors establishes the duration of the term of office and, where applicable, the limits of the powers of each Chief Officer.

The chief Officers' mandate expired on May 20, 2008. Thus as proposed by the Chief Executive Officer, EDF's Board of Directors appointed on April 3, 2008 Daniel Camus, Dominique Lagarde and Jean-Louis Mathias as Chief Officers, effective since the Shareholders' Meeting held on May 20, 2008.

#### 14.2.3 TOP 4 and Executive Committee

The Group's organization addresses two major directions: improving the capacity to work in an integrated group and associate the operational employees to the decision mechanisms.

The TOP 4, which gathers the Chairman and Chief Executive Officer and three Chief Officers, is the main decisional body at the head of the Group. The Executive Committee ("Comex") is the strategic and dialogue body in charge of all transverse subjects related to the Group, the review of major decision projects and the monitoring of operational objectives and results, and social and managerial issues. It includes all the members of the TOP 4, the operational and functional Chief Officers, the General Secretary and the Chairmen of the main subsidiaries, namely EDF Energy, EnBW and Edison. Its composition reflects the will to handle in a homogeneous way all stakes important to the Group.

On the date of the filing of this Document de Référence, the Comex members were as follows:

Name	Position	Date of 1 <sup>st</sup> Appointment to the Comex
Pierre Gadonneix	Chairman and Chief Executive Officer	November 30, 2004
Daniel Camus	Chief Financial Officer	November 30, 2004
Dominique Lagarde	Chief Human Resources and Communication Officer	April 1, 2006
Jean-Louis Mathias	Chief Operating Officer Integration and Deregulated Operations France	November 30, 2004
Jean-Pierre Benqué	Senior Executive Vice-President North America	November 30, 2004
Bernard Dupraz	Senior Executive Vice-President Generation & Engineering	November 30, 2004
Philippe Huet <sup>1</sup>	Senior Executive Vice-President Strategy and Coordination.	April 8, 2008
Marianne Laigneau	General Secretary	June 1, 2007
Pierre Lederer	Senior Executive Vice President, Customers	February 1, 2009
Anne Le Lorier <sup>1</sup>	Senior Executive Vice President Corporate Finance and Treasury	April 8, 2008
Bruno Lescoeur	Senior Executive Vice-President Gas	April 1, 2006
Umberto Quadrino	Chief Executive Officer of Edison	April 1, 2006
Vincent de Rivaz	Chief Executive Officer of EDF Energy	November 30, 2004
Hans-Peter Villis	Chief Executive Officer of EnBW	October 1, 2007
Gérard Wolf	Senior Executive Vice-President, International Operations and Group Synergies	April 1, 2006

**Daniel Camus.** Born on April 14, 1952 in Ugny (France), Daniel Camus holds a doctorate in economics, qualified in management science, and is a graduate of the Institut d'Etudes Politiques de Paris. After 25 years at Hoechst-Aventis in the industrial chemicals and pharmaceutical businesses in Germany, the United States, Canada and France, he joined EDF at the end of 2002 as a Finance Manager, then as a Chief Financial Officer since November 2004. In his last three positions, he was successively Financial Officer and member of the Executive Board of the Roussel Uclaf S.A., Hoechst Marion Roussel AG and Aventis Pharma AG, Frankfurt (Germany) and Bridgewater (USA). He managed the financial transformation of these internationally known companies at the time of their successive mergers until Hoechst and Rhône Poulenc merged with Aventis 1999. Daniel Camus is Chairman of the Board of Directors of EDF Energy, EDF Energy UK, EDF Energy group holding and EDF International, Director of Edison, Transalpina di Energia and Valeo, and member of the EnBW, Dalkia, SGL Carbon and Morphosys Supervisory Boards. He has been manager of Lake Acquisitions Limited since June 5, 2008.

Jean-Louis Mathias. Born on August 21, 1947 in Clichy-la-Garenne (France), Jean-Louis Mathias is a graduate of the Ecole Polytechnique, the Ecole Nationale de la Statistique et de l'Administration Economique (ENSAE), the Centre de Perfectionnement aux Affaires and holds a degree in sociology. He joined EDF GDF services in 1973 and has held various positions, notably that of customer service branch manager in Aix-en-Provence and Head of the

1 Effective as of May 20, 2008.

Customer Service Center in Paris. In 1992, he joined the Personnel and Employee Relations Division (division shared between EDF and Gaz de France) and was appointed Director in 1996. In 1998, he became the Marketing Director of Gaz de France before being appointed Director of Negotiations in 2000. From June 2002 to August 2004, he was Senior Executive Vice-President of Gaz de France. He returned to EDF in September 2004 as advisor to the Chairman and member of the Executive Committee. Since November 2004, he has been a Chief Operating Officer Deregulated Operations France of EDF, in charge of deregulated activities in France (in particular, generation and supply) as well as the Group's improvement programs for performance. He also oversees the gas activities and coordinates deployment means of the Group for international nuclear development. Jean-Louis Mathias is member of Dalkia's Supervisory Board. He is also Chairman of the Board of Directors of EDF Trading and Director of EDF Energies Nouvelles.

**Jean-Pierre Benqué.** Jean-Pierre Benqué is an engineering graduate of *Ponts* et Chaussées and was professor in liquid mechanics at the Ecole Nationale des Ponts et Chaussées from 1986 to 1996. He joined EDF in 1974 where he held several positions in the National Hydro Laboratory. In 1986, he became manager of the Research and Network Service and then the Technical Electricity Service in 1991. Two years later, he was given the responsibility of the overseas French departments and then became Head of Sales in the Large Customers Division where he negotiated energy and service offers with EDF's international customers. He was appointed Head of the EDF Business Division in February 2002 and became Senior Executive Vice-President, Customers in November 2004. Finally, he was appointed Senior Executive Vice-President North America on February 1, 2009.

#### Administrative, management, and supervisory bodies and senior management

Bernard Dupraz. Bernard Dupraz is a graduate of the Ecole Polytechnique and Mines Chief engineer. After beginning his career in the oil industry, then at the Ministry of Industry, he joined EDF in 1986 and held several positions in the Generation Division, notably, Head of the Nuclear Center of Electricity Generation in Cattenom (Moselle), then Operating Vice-President, Head of Operations of a fleet of 58 nuclear power plants from 1994 to 1998. He was appointed Head of Engineering and Services in 1999 and participated in the development of an EPR. First appointed Deputy Chief Officer in 2002, he has been Senior Executive Vice-President "Generation and Engineering" since November 2004.

Philippe Huet. Senior Executive Vice President Strategy and coordination, Philippe Huet holds a Masters from Harvard University, is a graduate of the Ecole Polytechnique and the Ecole nationale de la Statistique et de l'Administration Economique. He began his career in the United States and Venezuela first as a consultant then as international sales manager in an oil company. In 1985, he joined the Shell group where he held various positions in Paris and then London in the trading and risk management sector before being appointed Chairman and Chief Executive of Shell French West Indies and Guiana in 1996. He took over procurement in Europe in 1998 and then became General Manager global supply and freight from 1999 to 2001. He joined EDF in 2001 as upstream optimisation Director.

Dominique Lagarde. Born August 17, 1965 in Nancy (France), Dominique Lagarde is a graduate from the Ecole Polytechnique and as Chief Engineer of the Ecole Nationale des Ponts et Chaussées. After starting his career in Total Oil Marine in London and then in the French Nuclear Safety Authority from 1991 to 1997, he managed the Osiris nuclear reactor in the French Atomic Energy Commission (CEA) from 1997 to 2000. He joined EDF in 2000 in the EDF GDF Services Distribution division where he held various positions. Appointed Executive Vice-President of EDF GDF Services Nanterre in 2001, he became an executive officer of EDF GDF Services Seine et Marne in 2002. At the end of 2003, he was appointed Executive Vice-President for Communication and Public Affairs of the Group. He was director of the office of the Chairman in September 2004 and then Senior Executive Vice-President, Strategy and Coordination in March 2006. Dominique Lagarde is a member of the Supervisory Board of ERDF. Since May 20, 2008, he is Chief Human Resources and Communications Officer of EDF.

Marianne Laigneau. Marianne Laigneau is a graduate from the Ecole Normale Supérieure of Sèvres, holder of the aggregation degree in Classics and a postgraduate diploma in French literature and a graduate of the Paris Institut d'Etudes Politiques. She has been appointed General Secretary of the EDF group from June 1, 2007. She was posted as auditor to the Council of State (the French administrative supreme jurisdiction) on graduating from France's top school for senior civil servants (Ecole Nationale d'Administration - ENA - class "Condorcet"). She was subsequently promoted as auditor to Master of Requests in 1995 and Councillor of State in May 2007. From 1997 to 2000, she was seconded to the French embassy in Tunis as a foreign affairs political counsellor. After returning to the Council of State in 2000, she joined the Gaz de France group in February 2003 as head of Institutional Affairs and then, in January 2004, as Deputy Head of Information and Public Affairs. Before her appointment as EDF's General Secretary, she had headed EDF's Corporate Services department since January 2005. She is Chairman of the Supervisory Board of RTE-EDF Transport since February 2008.

Pierre Lederer. 60 years of age, qualified in Mathematics, Pierre Lederer joined EDF in 1974 where he held several responsibilities within the general economic studies department, the energy control department and the thermal production department. Chief of the general economic studies department in 1993, he was appointed EDF Director of Strategy in 1996 and then Director of "Strategy-Exploitation-Optimisation" within the Group's Industry Division in 1999. In 2000, he joined the management board of EnBW, the third greatest German energy producer held at 45% by EDF, and went on to become Vice Chairman of the management board in 2007. In the capacity of "Chief Operating Officer", he notably managed the preparation of sales procedures for the opening of energy markets.

He also put in place the optimisation of the value chain and the management of market risks, and launched the renewal of the company's power generation fleet. He was appointed Senior Executive Vice President, Customers on February 1, 2009.

Anne Le Lorier. Senior Executive Vice President Corporate Finance and Treasury, Anne Le Lorier is a former student of the Ecole Nationale d'Administration (André Malraux year), she is a graduate of the Institut d'Etudes Politiques in Paris and has a masters in law. She began her career at the Treasury Department of the Ministry for the Economy and Finance. In 1987, she was appointed technical adviser to the office of the Minister of State, the Minister for the Economy, Finance and Privatisation. She went back to the Treasury Department in 1988 as deputy director before being appointed economic affairs adviser to the office of the Prime Minister in 1993. She had various responsibilities in the Treasury Department of the French Ministry of Finance from 1996 to 1998 before joining Fimalac as adviser to the President and member of the Executive Committee. In 2002, she joined EDF as Corporate Finance and Treasury Director in the Finance Department. She has been appointed Senior Executive Vice President Corporate Finance and Treasury in 2008.

**Bruno Lescoeur.** Bruno Lescoeur is a graduate of the *Ecole Polytechnique*, the Ecole Nationale de la Statistique et de l'Administration Economique (ENSAE) and the Institut d'Etudes Politiques de Paris. In 1978, he joined EDF as an economist where he worked on issues related to tariffs from 1982 to 1987. After several positions within EDF and Gaz de France in France as well as abroad, he joined EDF's Financial Department in 1993. Until 1998, he was in charge of accounts, financing, mergers and acquisitions, while simultaneously managing a rapid debt reduction for the Company and its international expansion. He became the Chairman and Chief Executive Officer of the London Electricity Group (now EDF Energy) at the end of 1998 and led its development. From the beginning of 2002 to the end of 2004, he was Head of the Generation and Engineering Division at the time EDF was adapting its fossil-fired facilities and starting its new EPR. He was appointed Senior Executive Vice-President of EDF on December 20, 2004, in charge of International Holdings and Gas within the Executive Committee, and in charge of international external relations since April 2006. He is a Knight of the National Order of Merit.

Umberto Quadrino. Umberto Quadrino is a graduate in Economics. After starting his career in the Turin industrial union, he joined Fiat in 1970 where he occupied various functions as Administration and Control Director and then in charge of subsidiaries. In 1996, he was appointed Deputy Director of New Holland. In 2000, he came back to Fiat where he managed various divisions and in 2001 became the Chairman of Edison. He is Deputy Director of the Edison group.

Vincent de Rivaz. Vincent de Rivaz is a graduate of the Ecole Nationale Supérieure d'Hydraulique de Grenoble. In 1977, he joined EDF's Exterior Engineering Center within the International Affairs Division. From 1985 to 1992, he participated in EDF's development in China within the International Division, of which he became Director of the Far East Division in 1989. From 1992 to 1994, he was the Head of the National Center of Hydro Equipment within the Equipment Division. He was appointed Deputy Head of the International Division in 1995 and became Head of Projects in 1996. He joined the Finance Department in 1999 as Deputy Chief Financial Officer and became Head of Financial Strategies and Operations in 2000. He was appointed Chief Executive Officer of the London Electricity Group in early 2002. He led the merger transactions of companies acquired during the first six months of 2002 (Eastern and Seeboard networks) and created in mid-2003 EDF Energy and has since been its Chief Executive Officer. He was appointed to EDF's

Executive Committee in November 2004.

Hans-Peter Villis. Hans-Peter Villis is Chief Executive Officer of EnBW since October 1, 2007. He is a graduate in Economics. He was general manager of Städtische Werke Magdeburg GmbH from 1993 to 1999. He became member of the management board of Gelsenwasser AG in Gelsenkirchen from 2000 to 2002. Between 2003 and 2006, he held key positions at E.ON Westfalen Weser AG, Paderborn: from September 2003 to June 2006 as the Chief Executive Officer and from September 2003 as general manager of Elektrizitätswerk Wesertal GmbH, Hameln. Since June 2006, he was the Chief Financial Officer and deputy chairman of the board of directors at E.ON Nordic AB in Sweden.

Gérard Wolf. Gérard Wolf is a Senior Executive Vice-President International Operations and Group Synergies. He is an agricultural engineer and a graduate of the INA and the Institut d'Etudes Politiques de Paris. He began his career in the prefectorial office and was appointed Principal Private Secretary to the Defense Secretary of State in 1988. From 1996 to 1998, he was a deputy director in charge of emergency and firefight at the Ministry of the Interior. He joined EDF in 1998 as the Principal Private Secretary to the chairman before being appointed Director of the Group's coordination in 2001 and Director of the group's businesses in 2003. In November 2004, he became a director in charge of the Group's development and major projects, and then, in May 2008, Senior Executive Vice-President, International Operations and Group Synergies.

Annex C of this *Document de Référence* sets forth the current positions (outside of EDF and excluding the principal positions) held by the EDF Chief Officers as well as the positions they have held over the past 5 years.

### 14.2.4 Environmental, scientific and medical councils

EDF has also established an environmental council, a scientific council and a medical council, open to persons contributing their experience and expertise, in order to integrate these aspects into EDF's major strategic trends.

Created in 1987, the Scientific Council of EDF, is an advisory body providing the Company with the guidance and advice of senior scientists in choosing its research activities in the medium and long term. It meets three times a year to discuss thematic issues prepared before the meetings and subject to a detailed report. Its Chairman is Pierre Castillon, founding president of the Academy of Technologies. In 2008, the themes for which the Scientific Council's opinion was requested included of EDF include the storage of energy and high-performance digital simulation.

Composed of personalities from the medical world, specialist doctors, university professors, the Medical Council of EDF is a body reflecting and providing advice on a number of current topics regarding health at work, public health and environmental health in connection with the EDF's activities. Under the chairmanship of André Aurengo, Professor of Biophysics, Chief of the Pitié-Salpêtrière nuclear medicine department and member of the Medicine Academy, the Medical Council meets on average three times a year to discuss topics such as the electromagnetic fields, mental health, the risk of pandemic influenza. In 2008, the conclusions of the Council regarded namely the report of the IARC and the medicine and science academies on the causes of cancer as well as on the burden of diseases which could result from it in an industrial enterprise.

**14.3** 

## Absence of family ties, convictions and conflicts of interest of EDF Directors and Executive Officers

### 14.3.1 Absence of family ties among EDF directors and executive officers

To EDF's knowledge, there is no family relationship among EDF directors and executive officers.

### 14.3.2 Absence of convictions for fraud of EDF directors

To EDF's knowledge, none of the EDF directors and executive officers has

- convicted of fraud in the past five years;
- declared bankrupt or had their property impounded or liquidated in the past five years:
- the subject of an official accusation and/or penalty delivered by legal or regulatory authorities in the past five years.

In addition, to EDF's knowledge, in the past five years, none of its directors and executive officers has been prevented by a court from becoming a member of an administrative, management or supervisory body of a listed company, or from being involved in the management or direction of the affairs of such a company.

### 14.3.3 Conflict of interest of directors and executive officers

To the Company's knowledge as of the date of the filing of the present Document de Référence, there are no potential conflict as regards EDF, between the duties of EDF, directors and executive officers on the one hand and their private interests or other duties, on the other.

If a strict application of the criteria laid down in the report prepared by the Medef and AFEP could lead to some of them being considered as not independent, the Company considers that each of them has the abilities and professional experience necessary to the Company and enjoys complete freedom and independence of judgment.

To the Company's knowledge, there is no agreement entered into by shareholders, customers, suppliers, or others according to which a director has been appointed as either a director or an executive officer.

To the Company's knowledge, no director has agreed to restrict for a fixed period of time his ability to sell his equity holdings in the company, except for the restrictions resulting from the stock exchange ethics charter mentioned in section 16.7 ("Stock exchange ethics charter").

In addition, the directors and executive officers holding their equity interest through a FCPE of EDF group invested in the share capital of EDF, or who acquired EDF shares from the French State in the legal framework of the privatization regime are subject to the applicable nontransferability and lock-up rules.

#### **Compensation and benefits** 15.1 Compensation of Directors and Chief Officers 202 **15.2** Provisions for pensions, retirement fees, and other advantages 205 **15.3** Share ownership of Directors and Chief Officers 206 **15.4** Stock options for subscription of new shares and/or purchase of existing shares 206 **15.5** Agreements involving members of the Board of Directors 207

#### **15.1 Compensation of Directors and Chief Officers**

The tables below show the compensation and the various benefits paid and owed to each of EDF's Directors and Chief Officers during the 2007 and 2008 financial years by EDF and its controlled subsidiaries as of December 31, 2008.

#### - TABLE Nº 1 (AMF recommendations)

#### Summary table of the remuneration of, and the options and shares granted to, each chief officer

In euros	<b>2008</b> <sup>(1)</sup>	2007
Pierre Gadonneix, Chairman of the Board		
Remuneration due for the year (detailed in table 2)	765,731	1,056,981
Daniel Camus, Chief Financial Officer		
Remuneration due for the year (detailed in table 2)	634,768	822,084
Dominique Lagarde, Chief Human Resources and Communication Officer (as of May 20, 2008)		
Remuneration due for the year (detailed in table 2)	178,653 <sup>(2)</sup>	Not applicable
Yann Laroche, Chief Human Resources and Communication Officer (until May 20, 2008)		
Remuneration due for the year (detailed in table 2)	193,634 <sup>(3)</sup>	641,621
Jean-Louis Mathias, Chief Operating Officer Group Integration and Deregulated operations in France		
Remuneration due for the year (detailed in table 2)	555,064	745,220
TOTAL	2,327,850	3,265,906

<sup>(1)</sup> Remuneration due for the fiscal year 2008 does not take into account the variable elements of the compensation for 2008, which have not yet been determined at the filing date of the present Document de Référence (see tables 2 below).

<sup>(2)</sup> For exercise of chief officer functions held from May 20, 2008 to December 31, 2008.

<sup>(3)</sup> For exercise of chief officer functions held from January 1, 2008 to May 20, 2008.

#### - TABLE Nº 2 (AMF recommendations)

#### Summary table of the remuneration of each chief officer

#### Pierre Gadonneix,

Chairman of the Board

Citalillian of the board	20	000	20	07
In euros	Amounts payable	Amounts paid	Amounts payable	Amounts paid
- Fixed portion of compensation	760,000	760,000	725,000	725,000
- Variable portion of compensation	Not available <sup>(1)</sup>	326 250	326 250	325 000(2)

2008

2007

- Fixed portion of compensation	760,000	760,000	725,000	725,000
- Variable portion of compensation	Not available(1)	326,250	326,250	325,000(2)
- Exceptional remuneration		_	-	-
- Attendance fees	0	0	0	0
- Benefits in kind <sup>(3)</sup>	5,731	5,731	5,731	5,731
TOTAL	765,731	1,091,981	1,056, 981	1,055,731

<sup>(1)</sup> Taking into account the procedure to be implemented with respect to their calculation, the variable elements of the compensation for 2008 have not yet been determined at the filing date of the present Document de Référence.

(2) For 2006.

(3) These benefits in kind consist of the provision of a company car and energy benefits in kind.

#### Daniel Camus,

Chief Financial Officer	20	08	2007	
In euros	Amounts payable	Amounts paid	Amounts payable	Amounts paid
- Fixed portion of compensation	628,000	628,000	584,350	584,350
- Variable portion of compensation	Not available(1)	237,734	237,734	445,167(2)
- Exceptional remuneration	-	-	-	_
- Attendance fees	Not applicable	Not applicable	Not applicable	Not applicable
- Benefits in kind <sup>(3)</sup>	6,768	6,768	-	_
TOTAL	634,768	872,502	822,084	1,029,517

<sup>(1)</sup> Taking into account the procedure to be implemented with respect to their calculation, the variable elements of the compensation for 2008 have not yet been determined at the filing date of the present Document de Référence.

#### Dominique Lagarde, **Chief Human Ressources and Communication Officer**

(as of May 20, 2008)	20	008	2007	
In euros	Amounts payable	Amounts paid	Amounts payable	Amounts paid
- Fixed portion of compensation	171,110 <sup>(1)</sup>	171,110(1)	Not applicable	Not applicable
- Variable portion of compensation	Not available(2)	4,113	Not applicable	Not applicable
- Exceptional remuneration	-	-	Not applicable	Not applicable
- Attendance fees	Not applicable	Not applicable	Not applicable	Not applicable
- Benefits in kind <sup>(3)</sup>	7,543	7,543	Not applicable	Not applicable
TOTAL	178,653	182,766	Not applicable	Not applicable

<sup>(1)</sup> For the exercise of chief officer functions held from May 20, 2008 to December 31, 2008.

<sup>(2)</sup> For 2006 (of which  $\, \& 180,000 \,$  as three-year bonus paid in 2007, in accordance with his employment contract).

<sup>(3)</sup> These benefits in kind consist of the provision of a company car.

<sup>(2)</sup> Taking into account the procedure to be implemented with respect to their calculation, the variable elements of the compensation for 2008 have not yet been determined at the filing date of the present Document de Référence.

<sup>(3)</sup> These benefits in kind consist principally of the provision of a company car, energy benefits in kind and other advantages linked to the status of Electricity and Gas Industries personnel.

#### Compensation and benefits

Yann Laroche, Chief Human Ressources and **Communication Officer** 

(until May 20, 2008)	2008 2007		2007	
In euros	Amounts payable	Amounts paid	Amounts payable	Amounts paid
- Fixed portion of compensation	177,450 <sup>(1)</sup>	177,450(1)	428,431	428,431
- Variable portion of compensation	Not available(2)	167,215	167,215	188,477 <sup>(3)</sup>
- Exceptional remuneration	-	_	-	-
- Attendance fees	Not applicable	Not applicable	Not applicable	Not applicable
- Benefits in kind <sup>(4)</sup>	16,184	16,184	45,975	45,975
TOTAL	193,634	360,849	641,621	662,883

- (1) For the exercise of chief officer functions held from January 1, 2008 to May 20, 2008.
- (2) Taking into account the procedure to be implemented with respect to their calculation, the variable elements of the compensation for 2008 have not yet been determined at the filing date of the present Document de Référence.
- (3) For 2006.
- (4) These benefits in kind consist principally of the provision of a company car, energy benefits in kind and other advantages linked to the status of Electricity and Gas Industries personnel.

#### Jean-Louis Mathias, **Chief Operating Officer Group** Integration and deregulated operations in France

In euros	Amounts payable	Amounts paid	Amounts payable	Amounts paid
- Fixed portion of compensation	519,000	519,000	508,431	508,431
- Variable portion of compensation	Not available(1)	192,029	192,029	202,526(2)
- Exceptional remuneration	-		-	
- Attendance fees	Not applicable	Not applicable	Not applicable	Not applicable
- Benefits in kind <sup>(3)</sup>	36,064	36,064	44,760	44,760
TOTAL	555,064	747,093	745,220	755 717

2008

- (1) Taking into account the procedure to be implemented with respect to their calculation, the variable elements of the compensation for 2008 have not yet been determined at the filing date of the present Document de Référence.
- (2) For 2006.
- (3) These benefits in kind consist principally of the provision of a company car, energy benefits in kind and other advantages linked to the status of Electricity and Gas Industries personnel.

No options to subscribe or purchase shares were granted or exercised for the benefit of chief officers during fiscal year 2008. No performance shares were granted or exercised during the fiscal year 2008.

In accordance with legislative provisions in force, the Chairman of the Board is not entitled to attendance fees, and the Directors representing the State as well as those representing the employees carry out their mandate for free pursuant to Law n° 83-675 of July 26, 1983 concerning the democratization of the public sector.

The employment contract of Daniel Camus, in effect from November 14, 2002, contains an additional variable compensation calculated yearly on the basis of the Group's results and paid at the end of each 3-year period, and a contractual severance indemnity of 24 months, with a six-month notice. This indemnity represents two years of compensation calculated as the sum of the fixed annual compensation plus the average of the variable portion (annual bonus and multi-year bonus) for the three best years.

The Shareholders' Meeting of May 20, 2008 adopted a resolution to adapt this agreement to the provisions of article L. 225-42-1 of the French commercial code.

The "TEPA Law" of August 21, 2007 reinforced the transparency and governance requirements relating to deferred compensation of directors and officers, and in particular, requires from the corporate bodies to subject the severance payments to performance conditions. This new set of requirements also applies to the undertakings taken before the publication of the Law which were to be adapted to it within 18 months of the Law.

Following a favorable opinion of the Appointment and Remuneration Committee, the Board of Directors decided, during its April 3, 2008 meeting, pursuant to alinéas 1 and 2 of article L. 225-42-1 of the French commercial code, to subject the severance indemnity amounting to 2 years of compensation, provided for the benefit of Mr. Daniel Camus, Chief Financial Officer, in his employment contract entered into with EDF, to performance criterias and to the legal process of control by the corporate bodies.

2007

The Board of Directors fixed the performance criteria as follows:

- to maintain a rating for EDF of at least single A; and
- to reach at least 80% of the individual goals for at least two of the three last years

The severance indemnity will be fully paid if both criteria are fulfilled, will be paid at 50% if only one criteria is fulfilled and will not be paid if neither criteria is fulfilled.

According to the Law, this undertaking decided by the Board of Directors was approved by the ordinary Shareholders' Meeting of May 20, 2008.

With the exception of that which is indicated hereinabove, Pierre Gadonneix, Dominque Lagarde, Jean-Louis Mathias, Daniel Camus and Yann Laroche do not benefit from a specific pension scheme and did not receive any arrival bonus and will not benefit from a severance indemnity.

#### - TABLE N° 3 (AMF recommandations)

#### Table relating to attendance fees

Members of the Board	2008 attendance fees	2007 attendance fees
Pierre Gadonneix	0	0
Frank E. Dangeard	€39,750	€30,250
Daniel Foundoulis	€36,750	€23,500
Bruno Lafont <sup>(1)</sup>	€2,000	_
Claude Moreau	€31,750	€23,500
Henri Proglio	€22,000	€28,000
Louis Schweitzer <sup>(2)</sup>	€16,000	€20,000
TOTAL	€148,250	€125,250

(1) Appointed by the Shareholders' Meeting of May 20, 2008 to replace Louis Schweitzer. (2) Resigned from his position on May 10, 2008.

The fifth resolution submitted to the vote of the Shareholders' General Meeting of May 20, 2009 provides for the allocation of additional attendance fees to the Board of Directors in the amount of €32.000 for the year 2008.

The Supervisory Board of FCPE Actions EDF notified to EDF a draft resolution aiming at not awarding additional attendance fees to the members of the Board of Directors for the fiscal year 2008. This draft resolution, which was examined by the Board of Directors of EDF at its meeting of April 1, 2009, will not be recommended by the Board.

During the 2009 fiscal year, the competent bodies within EDF will examine the possible consequences of the decree n° 2009-348 of March 30, 2009 regarding certain conditions to management compensation in companies which benefit from State assistance or which have benefited from such assistance due to the financial crises, and in public companies.

## **15.2** Provisions for pensions, retirement fees, and other benefits

Directors and chief officers do not benefit from a specific retirement system.

## **15.3**

## **Share ownership by Directors and Chief Officers**

Following the Company's initial public offering on the stock exchange, some of EDF's directors and chief officers became shareholders of the Company. At the time of the present Document de Référence, the number of EDF shares held by each director and chief officer, as well as their holding method: (directly or through a company mutual fund (FCPE)), were as follows:

#### Shares in the Company held by Company Directors and Chief Officers as of December 31, 2008

Names	Number of shares
Pierre Gadonneix (shares held directly)	1,427
Daniel Camus (188 shares held directly and 1,114 shares held through a FCPE)	1,302
Marie-Catherine Daguerre (shares held through a FCPE)	96
Franck E. Dangeard (shares held directly)	50
Daniel Foundoulis (shares held directly)	250
Alexandre Grillat (shares held through a FCPE)	585
Bruno Lafont (shares held directly)	150
Dominique Lagarde (214 shares held directly and 585 shares held through a FCPE)	799
Jean-Louis Mathias (shares held through a FCPE) (the spouse of Jean-Louis Mathias holds 648 shares through a FCPE too).	931
Claude Moreau (shares held directly)	200
Philippe Pesteil (shares held through a FCPE)	316
Henri Proglio (shares held directly)	51

15.4

Stock options for subscription of new shares and/or purchase of existing shares

None

## **15.5**

## Agreements involving members of the Board of Directors

#### 15.5.1 Information relating to agreements involving members of the Board of Directors

Until November 20, 2004, EDF was an EPIC (établissement public à caractère industriel et commercial) and the provisions of the French Commercial Code relating to agreements involving members of the Board of Directors were not applicable.

Since the transformation of EDF into a French société anonyme on November 20, 2004, the provisions of Article L. 225-38 of the French Commercial Code relating to such agreements apply to EDF.

## 15.5.2 Statutory auditors' special report on agreements involving members of the Board of Directors for the financial year ended December 31, 2008

This is a free translation into English of the statutory auditors' special report on regulated agreements and commitments with third parties that is issued in the French language and is provided solely for the convenience of English speaking readers. This report on regulated agreements and commitments should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France. It should be understood that the agreements reported on are only those provided by the French Commercial Code and that the report does not apply to those related party transactions described in IAS 24 or other equivalent accounting standards.

#### Year ended December 31, 2008

To the Shareholders,

In our capacity as statutory auditors of your Company, we hereby report to you on regulated agreements and commitments with related parties.

#### Agreements and commitments authorized during the year

In accordance with article L.225-40 of the French Commercial Code (Code de commerce), we have been advised of the following agreements and commitments, which have been previously authorized by your Board of Directors.

We are not required to ascertain whether any other agreements or commitments exist but to inform you, on the basis of the information provided to us, of the terms and conditions of the agreements and commitments of which we were notified. It is not our role to determine whether they are beneficial or appropriate. It is your responsibility, under the terms of article R.225-31 of the French Commercial Code, to evaluate the benefits arising from these agreements prior to their approval.

We conducted our work in accordance with professional standards applicable in France; those standards require that we perform the procedures deemed necessary so as to verify that the information provided to us is in agreement with the underlying documentation from which it was extracted.

#### • Sale of EDF shares reserved for current and retired employees of EDF Group entities

Following the sale by the French State at the end of 2007 of a portion of its interest held in EDF's share capital via an accelerated private placement with institutional investors, the French State carried out an offering of EDF shares reserved for current and retired employees of EDF Group entities in September 2008.

As part of this offering of shares, a memorandum of agreement was entered into on October 23, 2008 between EDF, the French State and BNP Paribas Securities Services, describing the terms and conditions relating to payment, allocation of free shares and collection of unpaid amounts due in respect of the purchase of EDF shares, when necessary.

Upon conclusion of the share offering, 3,266,541 shares were delivered to the various subscribers on October 30, 2008. In connection therewith, your Company paid consideration of €137 million corresponding to the first payment installment owed by the subscribers. Payments to be received by the French State are scheduled until October 2011.

This agreement was previously approved by the EDF Board of Directors at its October 23, 2008 meeting.

Directors concerned: Messrs. Pierre-Marie Abadie, André Aurengo, Bruno Bézard, Gérard Errera, Yannick d'Escatha and Philippe Josse, in their capacity as representatives of the French State on the EDF Board of Directors.

#### Agreement between EDF and AREVA on the back-end cycle of nuclear fuel

On December 19, 2008, EDF and AREVA signed a long-term industrial cooperation agreement covering the following services:

- evacuation of all EDF spent fuel;
- technical and financial transportation conditions;
- processing and recycling of spent fuel over the period 2008-2012;

#### Compensation and benefits

- payment of a balancing cash adjustment to be paid in respect of the recovery and packaging of old waste, definitive shut-down and decommissioning of the La Hague facilities for €2.3 billion based on economic conditions existing as of December 31, 2007.

This agreement was previously approved by the EDF Board of Directors at its December 17, 2008 meeting.

Directors concerned: Messrs. Bruno Bézard and Gérard Errera, members of the Areva Supervisory Board.

#### Agreements and commitments authorized during previous years and having continuing effect during the year

In addition pursuant to the French Commercial Code, we have been advised that the following agreements and commitments authorized in previous years have had continuing effect during 2008.

#### Public Service Contract

On October 24, 2005, the French State and Electricité de France S.A. signed a public service contract whose purpose is to form the framework for Electricité de France S.A.'s public service mission and duties. This contract sets out the commitments undertaken by Electricité de France S.A. over the period 2005-2006-2007 and defines the financial compensation payable for public service obligations in particular the principles set for the calculation of and increase in electricity sales tariffs. In the absence of a new agreement, the performance of certain provisions of this contract was continued in 2008.

#### • Sale of EDF shares reserved for current and retired employees of EDF Group entities

As part of the opening of the share capital of the Company at the end of 2005, and of the preferential offer reserved for current and retired employees of EDF and certain French and foreign subsidiaries, EDF, the French State and BNP Paribas Securities concluded an agreement which describes the modalities relating to payments of shares, attribution of free shares and recovery of shares in case of insolvency.

34,653,721 shares were delivered to employees on January 30, 2006 pursuant to this agreement, corresponding to the consideration to be received by the French State until 2008.

Consideration of €114 million was paid to the French State in 2008.

#### Agreements with Areva Group

Your Company entered into three agreements with Areva Group in 2007 with respect to the following services:

- construction of the nuclear boiler for the Flamanville 3 EPR nuclear plant;
- maintenance and servicing of boilers as part of the third ten-year inspection of the 900MW-type nuclear plants in France;
- advance booking of forged parts for EPR reactors constructed abroad.

Total consideration for these agreements amounted to €764 million (of which €175 million and €204 million paid in 2008 and 2007, respectively), €116 million (of which €16 million and €27 million paid in 2008 and 2007) and €212 million, including an optional €106 million (of which €29 million and €18 million paid in 2008 and 2007, respectively).

#### Other Agreements and commitments

We hereby report on agreements and commitments governed by Article L. 225-42 of the French Commercial Code.

Pursuant to Article L. 823-12 of this Code, we hereby inform you that these agreements and commitments were not previously approved by your Board of Directors.

It is our responsibility, based on information provided to us, to describe the main characteristics and terms and conditions of these agreements and commitments, and the underlying circumstances which led to the prior authorization procedure not being followed. It is your responsibility, pursuant to Article R. 225-31 of the French Commercial Code (Code de Commerce), to assess the interest involved in respect of the conclusion of these agreements for the purpose of approving them.

#### . Non-interest bearing current account advance with Lake Acquisitions Ltd

As part of the acquisition on September 25, 2008 of approximately 26.5% of the shares issued by British Energy Group, by Lake Acquisitions Ltd, a subsidiary in which your Company indirectly owns a100% interest, a loan of £2,123 million (or €2,680 million) was granted by your Company to Lake Acquisition Ltd on September 23, 2008. The current account agreement signed for this purpose between the two companies did not include any clause providing for EDF to receive interest on this loan.

Your Board of Directors has deemed that the above-mentioned agreement falls under the scope of Article L.225-39 of the French Commercial Code and, as a result, takes the position that the prior authorization procedure set forth in Article L.225-38 does not apply to the above-described current account agreement.

Person concerned: Mr. Daniel Camus, Chief Financial Officer of EDF and managing director of Lake Acquisitions Ltd.

Paris La Défense and Neuilly-sur-Seine, February 11, 2009

The Statutory Auditors

**KPMG Audit** Département de KPMG S.A. Deloitte & Associés

Jean-Luc Decornoy Michel Piette Amadou Raimi Tristan Guerlain

# Functioning of the administration and management bodies

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## 16.1

### **Powers of the Board of Directors**

Pursuant to Article L. 225-35 of the French Commercial Code, the Board of Directors determines the orientation of the activities of the Company and oversees their implementation. Subject to powers expressly attributed by Law to the Shareholders' Meetings and within the limit of the corporate purpose of the Company, the Board may discuss any question relating to the functioning of the Company and acts, through its deliberations, on any such issue.

Moreover, in accordance with Article 7 of the French Law of July 26, 1983 relating to the democratization of the public sector, the Board of Directors deliberates, on all the strategic, economic, financial and technological trends of the Company and the Group and on the matters which the Law expressly attributed or reserved to it.

Under the rules, including the update was approved on 17 December 2008, the Board shall be referred to:

Pursuant to its rules of procedure, the update of which was approved on December 17, 2008, the Board of Directors shall among other things, be referred to with respect to:

- Operations of external or organic growth or disposal which represent a financial exposure for the Company over 200 million euros. This threshold is lowered to 50 million euros for acquisition operations that are not in the strategic directions of the Company;
- property transactions execeeding 200 million euros;
- certain financial transactions, when their amount exceeds a value determined each year by a special decision of the Council; so in 2008, the Board has set the following thresholds: certain financial transactions of an individual amount exceeding 4 billion euros and sureties, endorsements or guarantees of over 500 million euros. In addition, the Chairman and Chief Executive Officer reports to the Council on any surety, endorsement or guarantee which individual amount exceeds 100 million euros, made on behalf of the Company or by a company controlled by the Company:

- contracts (supplies, works or services with or without financial commitment) whose amount, including, where applicable, their successive amendments made during the same year, equals or exceeds 200 million euros, or is comprised between 100 and 200 million euros if these markets represent a new strategic direction or a new trade of the Group;
- long-term energy sales and purchases, CO<sub>2</sub> emission credits and quotas by the Company, or a company it controls exclusively, on annual volume or amounts exceeding:
  - 10 TWh for electricity;
  - 20 TWh for gas (long-term energy sales and purchase contracts above 5 TWh and below 20 TWh are also the subject of detailed information at the meeting of the Board of Directors which follows their signature);
  - 250 million euros for coal and carbon dioxide.
- operations of the nuclear fuel cycle: in particular, strategies relating to upstream and downstream operations of the nuclear fuel cycle;
- operations of transfer of obligations relating to the decommissioning or downstream of the nuclear fuel cycle.

In 2008, the Board of Directors has reviewed and authorized, in addition to numerous files related to the activity of the Company, major issues such as:

- the acquisition of British Energy in the United Kingdom, a subject which has resulted in two joint meetings of the Audit Committee and the Strategy Committee extended to all directors and in several meetings of the Board;
- the project of acquisition, via a joint venture, of 49.99% of the nuclear assets of the company Constellation Energy in the United States. This project is still subject to certain authorizations in the United States and all of its stages have been examined by the Board,
- the acquisition of gas assets in North Sea;
- the partnership project with the Chinese company China Guangdong Nuclear Power Holding Company Limited (CGNPC) and the project of acquisition by EDF International, alongside CGNPC, of an equity shareholding in a Chinese law company, which will eventually be the owner and operator of two nuclear technology EPR on the Taishan site in China.

## 16.2

## **Board of Directors meetings**

The Board of Directors meets as often as the interest of the company requires, upon notification by the Chairman, in accordance with applicable legislative and statutory provisions.

The rules of procedure provide that all directors participating in the meeting of the Board of Directors by any telecommunication means which allow their

identification and assure their effective participation, in accordance with applicable legal provisions, are deemed present for the purposes of calculating the quorum and the majority.

In 2008, the Directors' attendance rate to the Board of Directors' meetings was 82.4% for 20 Board meetings.

## **16.3**

## **Board of Directors rules of procedure**

The functioning of the Board of Directors is organized in accordance with the rules of procedure, which were amended by the Board of Directors on December 17, 2008.

At each meeting of the Board of Directors, the Chairman and Chief Executive Officer communicates to the Board members the main facts and significant events affecting the Company that have occurred since the date of

the last meeting of the Board of Directors. In order to obtain further information, directors may meet with the senior management of the Company or the Group regarding the subjects on the Board's agenda. They must inform the secretary to the Board of their request.

The rules of procedure also describe the organization, functioning and powers of the Board Committees.

## **16.4**

## **Evaluation of the Board of Directors**

In accordance with corporate governance principles (arising from Viénot and Bouton reports or from AFEP-MEDEF's report dated October 2003) and in particular the one which recommends to carry out an evaluation of the Board, the Board's rules provide that the Ethics "delivers each year a report on the evolution of Board's functioning [...] and suggests questions to be discussed".

EDF has also decided to give, every three years, to an external firm the making of this evaluation. As a result, the Ethics Committee of October 17, 2007, having mandated an external firm, this evaluation was conducted for the months of December 2007, January and February 2008, through thorough discussions with each director. From the results examined by the Ethics Committee and presented to the Board of Directors in the first quarter 2008, it is clear that the organization and functioning of the Board was very satisfactory, although several points have shown areas of possible progress. The update of the Board of Directors rules of procedure, approved in December 2008, has taken account some of these recommendations.

## 16.5

## **Committees of the Board of Directors**

In its functions, the Board decided to set up specialized consultative committees within the Board, whose functions are to prepare the case files in advance before they are presented in the whole committee. At the end of 2008, these committees were the following: an audit committee, a Nuclear Commitments Monitoring Committee (CSEN), a strategy committee, an ethics committee and an appointments and remunerations committee. The chairman of the French State general economic and financial control mission towards EDF is invited to the meetings of these Committees.

The chairmen of such committees are:

- Audit committee: Mr. Frank E. Dangeard;
- Nuclear commitments monitoring committee (CSEN): Mr. Frank E. Dangeard;
- · Strategy committee: Mr. Henri Proglio;
- Ethics committee: Mr. André Aurengo;
- Appointments and Remunerations committee: Mr. Bruno Lafont.

#### 16.5.1 Audit Committee

The Audit Committee is comprised of five members, and chaired by Mr. Dangeard, a director appointed by the Shareholders' meeting and external to the EDF group. The other members of the Committee are Mr. Bézard and Mr. d'Escatha, directors representing the French State, and Mr. Chorin and Mr. Villota, directors appointed by the employees. The Audit Committee perform the tasks, to which it has been assigned pursuant to the French Ordinance n° 2008-1278 of December 8, 2008 transposing the European Directive of May 17, 2006 on statutory audits of annual accounts and consolidated accounts.

The Committee regularly hears the auditors, the General and Financial Division, the Audit executive and the Risks Control Group executive. The Committee reviews and gives its opinion, before submission to the Board on:

- the Company's financial situation;
- the medium-term plan and the budget;
- the draft financial reports prepared by the financial Division (the annual financial statements of the Company, the consolidated annual financial statements and the management report of the Group);
- the monitoring of the Company's risks (in particular, the Group's risk management policy is regularly examined by this Committee which reviews every semester the Group's mapping of the consolidated risk and risk control methods):
- the audit and internal control: organization and evaluation of the system of internal controls, biannual audit programs, main findings and corrective actions arising from them, monitoring their implementation, as well as the draft annual report of the Chairman of the Board of Directors on corporate governance, internal control procedures and risk management

In addition to these missions, and since the update of the internal rules in December 2008, the Audit Committee also reviews the financial aspects of external or disposal operations which are particularly significant (see Section 16.1 ("Powers of the Board of Directors")).

During the year 2008, the Audit Committee examined in particular:

- the acquisition project of British Energy and this, together with the Strategy Committee,
- the policies relating to insurance,
- the strength of internal control mechanisms concerned by the sectors most impacted by the financial crisis, which led to the examination the policy of the Group's September 2008 consolidated and counterparty risk exposure, the Group's capital markets and energy risks policies, the management process of funds which are dedicated to future nuclear installations decommissioning as well as the internal control arrangements existing at EDF Trading or at the front office of EDF.

The average attendance rate to the Audit Committee is 77.5% in 2008 for eight meetings to of, including two joint meetings with the Strategy

### 16.5.2 Nuclear Commitments Monitoring committee (CSEN)

The Nuclear Commitments Monitoring Committee is composed of at least five directors. It has been chaired since November 2008 by Mr. Franck E.Dangeard, director appointed by the Shareholders' meeting and external to the EDF group. The CSEN was previously chaired by Mr. Bruno Bézard, a Director representing the French state, who resigned from office on July 1, 2008. The other members are Mr. Abadie and Mr. d'Escatha, directors representing the French State and Mr. Chorin and Mr. Villota, directors appointed by the employees.

This Committee's mission is to monitor the evolution of nuclear provisions, give its opinion concerning dedicated assets' management, the ratio between assets and liabilities and the strategic allowance, and to examine the compliance of EDF's dedicated asset management under the dedicated assets constitution and management policy. In this regard, it can rely on the works of the Nuclear Commitment Financial Expertise Committee (CEFEN) which is composed of five independent experts and which assists the company and its governance bodies on these questions.

The Committee met twice in 2008 with an average attendance rate of 83.3%.

#### **16.5.3** Strategy Committee

The Strategy Committee is comprised of seven directors, and chaired by Mr. Proglio, a director appointed by the Shareholders' meeting and external to the EDF group. The Committee's other members are Mr. Abadie, Mr. Bézard, and Mr. Errera, directors representing the French state, Mrs. Daguerre, Mr. Grillat and Mr. Pesteil, directors appointed by the employees. The Committee gives its opinion concerning the Company's main strategic guidelines, in particular concerning the strategic referential, the industrial and trade policy, the public service contract, strategic agreements, alliances and partnerships, the research and development policy, organic and external growth or transfer projects required to be authorized by the Board of Directors. In 2008, it examined among other things the strategies related to the acquisition of British Energy together with the Audit Committee, the photovoltaic solar power, town planning and positive energy buildings and 2050 electricity generating modalities. The Strategy Committee met 5 times in 2008, including twice in conjunction with the Audit Committee, with an average attendance rate of 71.4%.

#### 16.5.4 Ethics Committee

The Ethics Committee is comprised of six directors and chaired by Mr. Aurengo, a director representing the French State and external to the EDF group representing the State. The other members are Mr. Foundoulis and Mr. Moreau, directors appointed by the Shareholders' meeting, Mr. Chorin, Mr. Pesteil and Mr. Rignac, directors appointed by the employees. The Committee ensures that ethical considerations are reflected in the work of the Board of Directors and that the management of EDF are taken into consideration. It examines in particular:

- the annual report excluding financial statements (activity and sustainable development reports);
- the activity report of the Ethics advisor;
- as well as the reports of the Mediator, the General Inspector for nuclear safety and radiation protection and the Inspector for hydraulic safety.

Moreover, the Ethics Committee prepares every year a report regarding the evolution of the Board of Directors' functioning and the implementation of its internal rules, and suggests matters to be discussed.

In 2008 this Committee continued its reflection on policies relating to partnerships with service providers in the nuclear field, and in this context, visited the Nuclear Center of Electricity Generation in Cattenom (57). By associating to these works directors who are not members of the Committee, it worked on updating the Boards' internal rules and on the analysis of the AFEP-MEDEF recommendations of October 6, 2008 on the executive officers compensation of listed companies which were the subject of the approval decision by the Board of Directors on December 17, 2008.

The attendance rate in the Ethics Committee in 2008 was of 96.7% for 5 meetings.

### Functioning of the administration and management bodies

### 16.5.5 Appointments and Remunerations **Committee**

The Appointments and Remunerations Committee is composed of three directors. Since December 2008, it has been chaired by Mr. Bruno Lafont a director appointed by the Shareholders' Meeting and external to the EDF group. The two other members of the Committee are Mr. Dangeard, a director appointed by the Shareholders' Meeting and also external to the EDF group as well as Mr. Bézard, a director representing the French State. The Committee delivers to the Board of Directors proposals concerning the appointment of directors by the Shareholders' Meeting. It addresses, for approval, to the Minister of Economy and to the Minister of Energy its opinion on the remuneration of the Chairman and Chief Executive Officer (CEO) on the salary, the variable part (including objectives and criteria for its assessment of the results obtained by the CEO under the set objectives) and the peripheral remunerations of the CEO. It also sends a notice to the Board for deliberation and determination of those remunerations.

It discusses the salaries of Chief Operating Officers (DGD) and issues an opinion on the proposed remuneration that the CEO submitted on the salary, the variable part (including objectives and criteria for its assessment of the results obtained by the CEO under the set objectives) and the peripheral remunerations of each DGD. It sends its propositions and its opinion, for approval, to the Minister of Economy and to the Minister of Energy and also communicates it to the Board. The Board of Directors discusses and sets the salary, the goals and peripheral remuneration of the DGD.

It also conveys its opinion to the Board of Directors regarding the methods for establishing the remuneration of Company Senior Management (fixed and variable portions, method of calculation and indexation), as well as the amount and the allocation methods of the directors' fees. It assures the existence of replacement lists for the members of the Executive Committee. Elements relating to the compensation of corporate officers are listed in chapter 15.1 of this Document de Référence.

In 2008, the Committee met three times with an attendance rate of 88.9%.

### 16.5.6 Information and training of directors

The Chairman and Chief Executive Officer regularly informs the members of the Board of Directors of the major facts and significant events of the Company since the date of the previous Board meeting.

The General Secretariat of the Board of Directors also communicates to the directors certain information, which they may supplement by meeting with key leaders of the Group on the topics on the agenda of the Board meeting.

In addition, the Secretariat of the Board of Directors organizes information meetings on complex or high-stake issues or upon request by the directors. Thus, in 2008, the Board visited the "Great EPR construction", in Flamanville (50) and the research and development center of Renardières (77) having for agenda the works related to energy efficiency.

The General Secretariat of the Board of Directors organizes training courses requested by directors.

#### 16.5.7 Corporate governance code

After being acknowledged with the AFEP-MEDEF recommendations from October 2008, which were included in the communication of the Council of Ministers on October 7, 2008, on the compensation of corporate officers, and upon proposal by the Remuneration Committee, the Board of Directors. which met on December 17, 2008, expressed his agreement on these recommendations. The Board considered that these recommendations are included in EDF's corporate governance approach, which has been implemented for a long time and noticed that the recommendations applicable to the company had already been implemented by it.

Subject to the specific laws and regulations applicable to it, these recommendations will form part of the corporate governance code to which the Company will refer, pursuant to Article L. 225-37 of the French Commercial Code.

#### 16.6 **EDF** ethical approach

EDF's ethical approach, presented for the first time at the meeting of the Board of Directors of March 26, 2003 and coordinated by the Head of Ethics, a person specifically appointed for this purpose, consists of the distribution of and adherence to a Code of Ethics centered on five values: respect for individuals, respect for the environment, performance, solidarity and integrity.

The code details the ethical commitments of the Group with respect to interested parties (principles of collective action) as well as an individual code of conduct (Ethics Guide). These values underlie the social and

environmental commitments of the company, particularly the UN Global Pact, Agenda 21 and the EDF group Social Responsibility Agreement signed on January 24, 2005. The approach is implemented by management in all parts of the Group.

The Code of Ethics is available on EDF website.

A whistleblower procedure was implemented in January 2004, which makes it possible to question the ethics advisor on any question, warning or complaint of an ethical nature. This system is open not only to employees, but also to external partners and customers.

## **16.7**

### Stock exchange ethics charter

Following the Company's listing on the stock exchange in November 2005, EDF adopted early 2006 a ethics charter aimed at imposing the respect of the applicable rules and principles as well as the recommendations made by the stock market authorities in the area of risk management related to the holding, disclosure, or possible using of privileged information.

To that purpose, the EDF group has in particular decided to set up abstention periods (black-out) during which insider persons according to article L465-1 of the Financial and Monetary Code cannot buy, sell or conclude operations on EDF's shares.

Black out periods are short, foreseeable, and significant non-public information about the EDF group can circulate within the Group during that time. Those periods take place:

- between the first day of each quarter and the day of the press release publication related to the annual or half-yearly financial statements or EDF quarterly sales (included); and/or
- between the day when the person gets to know the inside information and the day when this information is made known to the public.

## 16.8

### **Internal control**

### 16.8.1 Chairman of the Board of **Directors' Report**

Pursuant to article L225-37 of the French Commercial Code, the Chairman of EDF's Board of Directors is required to deliver a special report, enclosed to the management report of the Board, regarding the status of the preparation and organization of the work of the Board of Directors, as well as the status of the internal control procedures implemented by the Company.

This report is reproduced in Annex A.

16.8.2 Independent auditors' report, prepared in accordance with article L 225-235 of the French Commercial Code, on the Report prepared by the Chairman of the Board of EDF, regarding the internal control procedures relating to the preparation and processing of accounting and financial information

This report is reproduced in Annex B.

## 16.9

### Compliance with the corporate governance principles in force in France

Subject to what is described below, EDF adheres to the corporate governance principles applicable to listed companies as described in the October 2003 AFEP-MEDEF report, and in particular to the key corporate governance principles relating to:

- responsibility and loyalty of the directors and managers;
- independence of the Board;
- transparency and diffusion of information;
- respect of the shareholders' rights.

In this specific legal framework, EDF is committed to implementing the recommendations set out in this report, in particular by having the Board to adopt rules of procedure setting the main principles for its functioning, how it should operate (see section 16.1 ("Powers of the Board of Directors")) and the creation of specialized committees.

Given the specific legal rules that apply to the composition of the Board of Directors (see section 14.1.1 ("Composition of the Board of Directors")), EDF does not completely comply to the AFEP-MEDEF report's recommendations as regard to the number of independent directors within the Board. According to those specific rules, the Board of Directors includes, out of 18 members, 12 directors (including 6 directors representing the French State and 6 directors representing the employees or the shareholders employees) that cannot correspond to the independence criteria as set out in the AFEP-MEDEF report.

After having considered the AFEP-MEDEF recommendations from October 2008 through the communication of the Council of Ministers on October 7, 2008 on the remuneration of leader officers of companies and the proposal of the Remuneration Committee, the Board of Directors of EDF met on December, 17 2008 to approve these recommendations.

## **Employees/Human resources**

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The EDF group has continued its adaptation in 2008 in a now fully open market (parenting of the distributor and reform of special pension plans) while maintaining internal cohesion, EDF has also adhered to corporate values while pursuing its skills renewal. The Human Resources workshops conducted will accompany the evolution of the professions, prepare the Group's future and contribute to defining a new balance of the social contract between EDF and its employees.

The international dimension (especially European) of the Group is now very present through its subsidiaries.

Three major imperatives drive the Group's human resources policies:

- to permanently adapt the jobs and skills necessary for the industrial and commercial success of EDF and for the development of the businesses, while pursuing an active resource optimization policy;
- to mobilize the Group's entire workforce, in particular, by offering them attractive working conditions and opportunities for professional development; and
- to promote social dialogue, diversity and equal opportunities throughout the Group, in particular, through the implementation of the Corporate Social Responsibility agreement (see section 17.6.3 ("Social dialogue and representation of Group employees") below).

# 17.1 Workforce

## **Group workforce**

The consolidated workforce of the EDF group totaled 160,913 persons as of December 31, 2008, with 104,929 within EDF, ERDF and RTE-EDF Transport and 55,984 within its subsidiaries and shareholdings in France and abroad which are included in the scope of consolidation.

The table below shows the change in the workforce for the Group's shareholdings and subsidiaries, weighted by the financial consolidation percentage over the last three financial years:

As of December 31

	7.5 Of December 5.17					
	2006		2007		2008	
	Number	%	Number	%	Number	%
EDF, ERDF and RTE-EDF Transport (*)	106,565	68	105,322	66	104,929	65
Subsidiaries and shareholdings	49,959	32	53,318	34	55,984	35
TOTAL	156,524	100	158,640	100	160,913	100

<sup>(\*)</sup> The workforce of EDF, ERDF and RTE-EDF Transport include employees not employed under the IEG status in EDF and RTE-EDF Transport). ERDF's payroll includes, in addition to its own employees, those whose services are shared, who can be broken down into 100% electricity employees (29,109), and a proportion of employees seconded to mixed gas and electricity activities (8,092) with an electricity/gas distribution key of 75/25.

#### **EDF, ERDF and RTE-EDF Transport workforce**

For some 20 years, the workforce of EDF, ERDF and RTE-EDF Transport decreased each year (except in 2000, when it increased slightly, due to the creation of jobs, following the implementation of a reduction in working hours agreement).

The table below shows the breakdown of employees of EDF, ERDF and RTE-EDF Transport between the different Divisions/Subsidiaries as of December 31, 2008:

#### **EDF, ERDF and RTE-EDF Transport workforce**

		<b>Employees</b>	
	2006	2007	2008
Regulated sector:			
ERDF	43,077 <sup>(*)</sup>	36,448 (*)	35,156
RTE-EDF Transport (**)	8,333	8,550	8,782
Deregulated sector			
Generation and engineering	35,233	35,609	36,109
Sales	6,092	12,337	12,226
Headquarters	9,601	8,432	8,713
CDI and CDD (not employed under the			
IEG status)	954	694	709
Island Electricity Systems (SEI)	3,275	3,252	3,234
TOTAL	106,565	105,322	104,929

<sup>(\*)</sup> SEI's workforce excluded

#### Consolidated subsidiaries' workforce (excluding RTE-EDF Transport and ERDF)

The table below shows the breakdown of employees (Group's share) in the subsidiaries and shareholdings included in the scope of consolidation as of December 31, 2008:

	Employees			
	2006	2007	2008	
Subsidiaries in France: (including Electricité de Strasbourg, TIRU, EDEV)	2,618	3,708	4,599	
EDF Energy (United Kingdom – Outside British Energy)	12,320	13,158	13,406	
EDF Trading (United Kingdom)	329	426	563	
EnBW (Germany)	9,743	9,336	9,445	
Edison (Italy)	1,507	1,449	1,450	
Dalkia International	14,866	16,070	17,822	
Other foreign subsidiaries	8,576	9,170	8,699	
Eastern Europe	5,905	6,818	6,585	
Western and Mediterranean Europe and Africa	1,909	1,946	1,950	
Asia Pacific	325	321	74	
Americas	437	85	90	
Other	0	0	0	
TOTAL	49,959	53,318	55,984	

<sup>(\*\*)</sup> The workforce of RTE-EDF Transport includes employees not employed under the IEG status

#### **Electricity and gas industries employment status**

As of December 31, 2008, almost all of employees of EDF, ERDF and RTE-EDF Transport were subject to the status applicable to employees of the Gas and Electricity Industries (Industries Electriques et Gazières, or "IEG")1. The IEG status was instituted by the French Decree of June 22, 1946 pursuant to the French law of April 8, 1946, which nationalized the electricity and gas industries. It relates to active and retired staff of the IEG branch companies.

In accordance with the provisions of Article L. 2233-1 and L. 2233-2 of the French Labor Code, the provisions of the status may be amended and the terms of their application determined contractually through companywide agreements, within the scope established by the status. Moreover, the French law n° 2000-108 of February 10, 2000 relating to the modernization and expansion of the public service for electricity enlarged the scope of contractual applications in the electricity and gas sector by introducing industry-wide agreements, with which all companies in the sector must comply (including foreign companies doing business in France).

In 2008:

- Annex 3 of the law has been completely rewritten by:
- the Decree n° 2008-627 of June 27, 2008 relating to the pension and disability for employees in the electricity and gas industries after the reform of the special pension system (see section 17.8.1 "Special pension system" below):
- the Decree n° 2008-1514 of December 30, 2008 relating to certain special social security schemes and supplementary pension scheme of social insurance in favor of agents not titular with the State and with public authorities. This decree has made some clarifications (early departure for long careers, increase the rate of premium, revaluation of pensions from April 1, of each year).
- Articles 4, 6, 20, 22, 23, 24 and 26 of the code were amended by the Decree n° 2008-653 of 2 July 2008 amending the national status of employees in electricity and gas industries, to repeal the age and nationality conditions at hiring and taking into account, in particular, the reform of the special pension and disability schemes (modification of conditions for inactivity, creation of a leave to raise a child under eight years old, benefit of family benefits, etc.).

# 17.3

#### **Organization and working hours**

Since October 1, 1999, working hours in France are 35 hours per week with the divisions operating 5 days per week, at the minimum.

As of the end of December 2008, 13.3% of the EDF employees have opted for collective or individual reductions in working hours, with partial compensation for loss of earnings.

In addition, in order to ensure the continuity of operations of the facilities of EDF, ERDF and RTE-EDF Transport or to restore as soon as possible the supply of electricity in case of a technical failure, part of EDF's workforce is on continuous duty 365 days a year, and another part provides the on-call service outside working hours.

# **17.4**

#### Skills, training and mobility

Managing skills is an important objective for the Group's performance, both in terms of economic performance and professionalism. This is particularly true in France in a context where the market has been totally open to competition since 2007 and where a significant number of employees will leave on retirement. Training, recruitment and mobility are key means to ensure the renewal of skills. This explains why EDF, which operates in

a field requiring highly technical skills, has always allocated a large budget to training its employees so as to be constantly in step with professional developments and careers.

The table below sets forth this training effort within EDF, ERDF and RTE-EDF Transport:

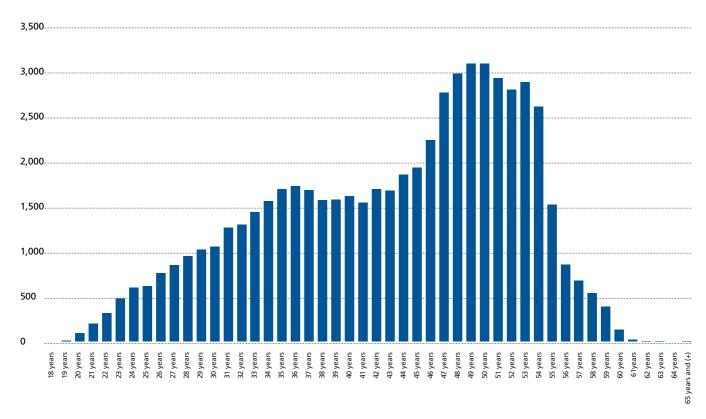
	2006	2007	2008
% of the payroll engaged in training	6.2	6.3	6.9
Number of training hours per employee	39	40	41

<sup>&</sup>lt;sup>1</sup> Employees of certain of the Group's French subsidiaries are also subject to IEG status (for example, the staff of Electricité de Strasbourg).

The large number of employees leaving active life in France requires the replacement of highly-qualified employees in different core businesses of EDF, ERDF and RTE-EDF Transport (production, engineering and distribution). Due to an unbalanced age structure (more than 65% of the workforce is over 40), the operating and maintenance teams of the Production and Engineering in these two EDF core businesses will experience the retirement of approximately half of their workforce between 2008 and 2015. These retirements in the years to come provide an opportunity to adapt the number and the profiles of the employees to the challenges of EDF, ERDF and of RTE-EDF Transport on the short-term as well as on the medium-term.

The graphic below presents the age structure as of December 31, 2008:

#### Age structure-Workforce of EDF and RTE-EDF Transport as of December 31, 2008



As for what concerns recruiting, EDF, RTDF and RTE-EDF Transport recruited more than 3,500 people in 2008. In a highly competitive labor market, EDF has increased the communication of its employer brand towards young graduates and modernized its method of recruitment (websites, etc.).

To adapt their business areas and skills, and to take into account the Group's development projects, EDF and ERDF anticipates recruiting approximately 15,000 people in France over a five years period. In the nuclear business, the company will recruit 500 engineers per year three times more than previously.

Recruitment accompany development projects and contribute to renewal of the new and growing businesses area skills. EDF is also continuing its large program for reorganizing the declining businesses (service, central functions) around new and growing businesses areas.

The replacement rate (recruitments/retirements) would be of around 3/5 with EDF and ERDF in the years to come. For the period 2009-2011, in a context of growing retirements due to demographic evolutions, it will be necessary to take into account, together with the skills renewal required for the future, the support to the Group's expansion plans in France and abroad and the control of the total payroll.

#### **17.5 Equal opportunity**

#### **APPRENTICESHIP**

Apprenticeship is one of the training methods chosen by EDF, ERDF and RTE-EDF Transport to fulfill the need to renew its internal skills and those of its main industrial partners. Apprenticeship aims at offering youngsters, and more particularly those who are less favored, the opportunity to start their career with recognized assets: a diploma and a professional experience.

EDF and ERDF reached its target in favor of apprenticeship by welcoming more than 3,400 young people (through apprenticeship and professional contracts) into the company during 2008, representing approximately 3% of the company workforce.

EDF and ERDF have more than doubled, in three years, the number of apprenticeship and professional contracts. Apprenticeship concerns all Group's lines

#### Employees/Human resources

of business, namely generation, distribution and supply, as well as all levels of qualification, from the general or the technical sectors, including those with postgraduate education.

If some of these youngsters in apprenticeship are meant to be hired by EDF and ERDF in order to take part in the renewal of competencies, others will be able to find an employment within its service providers also facing the renewal of competencies or in companies seeking skills acquired at EDF and ERDF.

#### **SOLIDARITY/SENIORS**

In 2008, more than 60 contracts have been concluded by EDF and ERDF under the senior recruitment program providing for subsidized contracts for people over 50 and especially long-term unemployed.

#### **DIVERSITY**

EDF's Chairman signed on June 1st, 2006, a commitment to encourage diversity and equality of opportunity within the company and to prevent discrimination. Initiatives deployed as action plans at EDF's operational senior management level are now being implemented and followed-up. EDF's policy on diversity has given rise to awareness programs for employees on representations and stereotypes linked to diversity.

EDF also signed the Diversity Charter on September 22, 2006. EDF obtained the Equality Label at the end of 2006.

In addition, all the restrictions in the hiring policies in relation with age and nationality criteria which were set forth in the IEG status have been eliminated by the Decree of July 2, 2008 (see section 17.2 "Electricity and gas industries employment status" above).

On March, 30, 2006, EDF entered into an agreement for the professional

integration of disabled persons. The Company committed itself to recruit at least 4% of disabled people. 155 of disabled workers have been hired in 2008 by EDF and ERDF. In addition, EDF and ERDF are leading a voluntary action to welcome each year several dozens of young disabled people through apprenticeship and professional contracts (34 in 2008). An agreement under negotiation should be concluded during the first quarter of 2009.

A second agreement was signed on December 21, 2007 relating to the professional equality between men and women. It commits signatories around six themes: sustainable change of mentalities, mixity of employment and recruitment, equality in career paths, equal opportunities in access to vocational training, taking into account the time and working conditions and the balance between the professional and private life. The signatories also pledged to eliminate the wage gap between women and men as soon as possible and no later than December 31, 2010.

#### **SUBCONTRACTING**

In line with the agreement on the EDF group Social Enterprise Responsibility (SER) signed on January 24, 2005, the Company entered in October 2006 into an "agreement on socially responsible subcontracting within EDF" with three of its trade unions (CFDT, CFTC and CFE-CGC). This agreement highlights the desire to maintain lasting industrial partnerships and services beyond short-term interests, so as to allow our services providers to be able to strengthen their activities and reinforce their capacities to develop in the long-term beyond the one-time or short-term transactions. Through this agreement, EDF commits itself with subcontracting partners to concrete and realistic actions in order to ensure that their interventions are done in the best conditions of employment, qualification, work and health-safety. A monitoring committee composed of the signatories shall meet twice a year and examines the actions planned under this agreement.

# 17.6

#### Social dialogue and employee representation

#### 17.6.1 Social dialogue in France

Most of the negotiations engaged under the Social Agenda 2006-2008 were carried to term, a new standard agreement "Social Agenda" for 2008-2010 was signed on July 10, 2008 by all of 5 trade unions (CGT, CFDT, CFTC, FO and CFE-CGC). This agreement, the third since 2004, carries the the contracting parties' will to maintain a social dialogue based on the development of collective negotiation in the Company.

The Social Agenda imposes a commitment to dialoging and concerting in following fields:

- New career opportunities for employees professional path: negotiations related to the context of changing jobs and longer working life, induced by the pension reform, lead to further work on the GPEC (provisional management of employments and of skills), to initiate a review of the February 24, 2006 agreement on training throughout life and a dialogue on the tools of promotional training. It is also in this context that negotiations to renew the previous agreement on disability has been launched;
- Total remuneration and protection of employees: in the continuation of the negotiations conducted at the professional branch level at the end of 2007, recent negotiations have enabled the introduction in the

company of a retirement savings plan and of a collective supplementary pension plan. The universal service assistance check to early childhood has been established in this framework;

• Management of time and work life quality of employees: it is a priority theme for a series of works also encompassing the issue of health. In this context, an agreement was signed by all trade unions on the creation of a National Council of the health at work. A consultation on the prevention of discriminatory practices and a general framework for the investigation of remedies are also in place. Finally, a profound reflection work is involved with the social partners on the work organization, in connection with the contractual provisions relating to the working organization and time (agreement of January 25, 1999).

#### 17.6.2 Employee representation in France

Pursuant to the national IEG status, EDF had in France special employee representation bodies since 1946 (statutory organizations).

EDF's method of employee representation in France was different from that provided in generally applicable French labor law as established by the Auroux laws of 1982. The Law of August 9, 2004 on the electricity

and gas public service and on electricity and gas companies obliged all enterprises in the IEG Professional Sector to adapt their employee representation institutions (institutions représentatives du personnel or IRP) to comply with the provisions of the French Labor Code.

The objective of this adaptation was to replace the current statutory bodies of employee representation with the general-law system providing for the setting up of a central company committee, corporate committees, and employee representatives. The company negotiation was launched in January 2007 in order to put in place the new employees' representing entities in the given deadlines.

The Decrees of April 11, 2007 in implementation of the Law, provided for establishing a Central Works Council and local Establishment Councils, as well as Employees' Representatives before December 31, 2007. The decrees also provided for the retention of Employees' Secondary Committees for both management and non-management grade employees.

A Branch agreement dated April 27, 2007 established the date of elections for setting up the new IRPs as November 29, 2007. Agreements concerning the organization of elections and the deployment and procedures of the IRPs were also signed at corporate level on September 28, 2007. Elections were held on November 29, 2007 with a second round on December 13, 2007. New IRP are now in place.

Since the beginning of 2008, an agreement on exercising local trade union rights, an agreement to the rules on composition and procedures for the Employees' Secondary Committees, an agreement on the operational resources of the Central Works Council and an agreement on the access of unions to new information and communication technologies have been signed.

#### THE CENTRAL DESK OF SOCIAL ACTIVITIES ("CAISSE CENTRALE D'ACTIVITÉS SOCIALES" OR CCAS)

Managing social and cultural activities is delegated, contrary to French common law, to specific organizations in the IEG branch:

- the CCAS which deals with activities at the national level;
- the 106 Caisses Mutuelles Complémentaires et d'Action Sociales (CAS) which administer local or decentralized social and cultural activities: until April 1, 2007, the CAS also managed the complementary IEG healthcare benefits regime.
- the CAS Coordination Committee: it represents the CAS at the national level. It is responsible for distributing resources between the CCAS (71% of the 1% paid by the IEG branch companies) and the 106 CAS (29%).

Following the IEG branch negotiations and the creation on April 1, 2007 of the IEG Health Insurance Fund (Caisse d'Assurance Maladie des IEG or CAMIEG) dedicated to managing the special IEG health insurance scheme, the CCAS and the CAS are now responsible solely for management of social activities.

The financing of social activities within the IEG is provided by a deduction of 1% from the operating income of the companies distributing gas and electricity, of which EDF, GDF Suez and the Local Distribution Companies. In 2008, the amount recorded by EDF, ERDF and RTE-EDF Transport for this 1% was €332 million (against €310 million in 2007). To be added to this, in accordance with the provisions of Article R. 2323-20 of the French Labor Code, are expenses related to transportation, food and accommodation which amount to €109 million in 2008 for EDF and ERDF.

The CCAS, the CAS and the CAS Coordination Committee are legal entities and are fully independent. The CCAS is administered exclusively by representatives of the employees and is placed under the supervision of the public authorities. Neither EDF nor any other company of the IEG branch is represented on it

#### 17.6.3 Social dialogue and representation of Group employees

In the Group's other companies, mainly abroad, employee representation is organized in accordance with applicable local laws and regulations.

#### **SOCIAL DIALOGUE ENTITIES**

Since then end of 2001, the Group created a European Works Council (Comité d'Entreprise Européen, or the "CEE") consulted on the Group's major policies. In May 2005, a revision of the agreement brought new provisions relating to the functioning of this body. The CEE of the EDF group is now composed of 33 permanent members and is informed of the Group's economic, financial and social strategies.

Through its working groups, the CEE started numerous analysis relating to the drafting of human resources policies at an international level, notably concerning health and safety within the different companies of the Group in Europe or in relation with the opening of the negotiations on the social responsibility of the EDF group.

An agreement relating to the France Group Committee has been signed on September 1, 2008 between the 5 representative trade unions. In accordance with the legal criteria, 14 companies of the EDF group (including RTE-EDF Transport and ERDF) have been incorporated into the perimeter of the Group Committee composed of 28 members.

#### **COMPANY'S SOCIAL LIABILITY (RSE) AGREEMENT**

The EDF RSE agreement was negotiated and executed on January 24, 2005 with the employee representatives and trade unions of all of the Group's companies and with the four international trade union federations for the industry.

This agreement provides the Group with a basis for shared commitments and common orientations, which apply to EDF and to all of the companies that it controls in accordance with the principle of subsidiarity and contributes to the long-term improvement of its performance, the construction of a Group identity, the renewal and broadening of the subjects of social dialogue.

According to this agreement, a social dialogue started within all companies in order to identify in a concerted way, the provisions of the local implementation and the priorities. An implementation report is drafted and presented each year to a special body at Group level: the Dialogue Committee on the Group's Social Responsibility. The results of the first three years of implementation of the RSE agreement show that, even with the existence of very different economic, social and cultural backgrounds, the Group's companies are already respecting a good level of the Group's commitments. Six transversal matters of the Group were subject to a deepening in the Committee in relation with the management in 2008: career paths, anticipating and supporting the social consequences of industrial restructuring, the fight against discrimination, relations with subcontractors, energy efficiency, the local economic and social development as well as social dialogue. In spring 2008, the signatories, emphasizing the progress achieved, have decided to continue the process over time by starting the negotiation of a new agreement in the same spirit as the first agreement.

#### Health and safety - Quality of working life

The Group operates in a high-technology sector where there are risks. The health and safety of its employees and its outside subcontractors is therefore a major imperative for the business.

Prepared in October 2003, EDF's health and safety policy in France is the fruit of a wide-ranging consultation with all interested parties (management, experts, doctors, employee representatives) within the Group. It is in line with the Group's core value of respect for the individual.

The National Committee for Orientation and Monitoring made an annual review of the health and safety policy in order to ensure its implementation, to analyze the results, check the efficiency of the provisions and sug-

EDF created in 2007 a "National Monitoring Organization for Quality of Life in the Workplace", thus reinforcing its ethics plan and simplifying its procedures to foster neighborhood management.

The Organization has held five meeting since its implementation on June 22, 2007. It is a place for dialogue involving physicians, managers, social partners, etc. It has a monitoring mission. A group "Quality of life in the workplace" project workshop is devising a method for drawing up a status report within each entity backed up by indicators.

In 2008, the Organization recommended the diffusion of the EVREST ("Evolutions et Relations en Santé au Travail") device in the company in order to be equipped with a system of indicators relating to health and work. This device should be deployed at EDF in 2009.

Corporate values were reaffirmed and were the subject of an important internal communication. Each entity has appointed an ethics representative and a free "life at work" telephone number available for employees in difficulty is under experimentation. Immediate support is provided in case of serious incidents (suicide, attempted suicide, accident, etc.) to relatives, to work teams and to the management.

In 2008, a social agreement established a National Concil of Health at Work ("Conseil National de Santé au Travail") which comprises representatives of business and trade unions, of occupational physicians and of the French hygiene, safety and working conditions committees ("Comités hygiène, sécurité, conditions de travail - CHSCT").

#### **Accidents at work**

For more than 10 years, EDF has made a considerable effort in prevention and training, which has allowed it to significantly reduce the rate of accidents at work which result in leave.

The frequency rate in 2008 was 3.4 (3.8 in 2007) (number of accidents that resulted in a stoppage of work more than one day, and included in the current year and per million hours worked).

Progress achieved in 2008 as in previous years should, in the long term, allow the company to achieve a rate of 5 and thus strengthen its position as a leader among French and European energy companies who are progressing at the same pace.

The work injury safety ratio for 2008 is at 0.17 (0.19 in 2007) (number of calendar days, broken down by year, of accident-related absence (including those resulting from accidents in previous years) per thousand hours worked).

#### **Asbestos**

In the past, the EDF group has, used materials and facilities containing asbes-

The substitution of materials containing asbestos in EDF's establishments and facilities began at the end of the 1980s, and all materials containing asbestos have been treated in accordance with regulations in effect. EDF has set up information measures and arrangements for the protection of employees and subcontractors working in the company in accordance with regulations in effect.

On July 15, 1998, EDF signed an agreement (revised in June 2002) with all the trade union federations for the prevention of and compensation for exposure to asbestos. Following this agreement, EDF implemented a preretirement plan for workers who are recognized as suffering from a workrelated illness associated with asbestos, to establish voluntary financial assistance and a pension supplement both financed by EDF and to supply corporate assistance to sick workers and their families by means of information and support during the compensation process.

See section 20.5 "Legal and arbitration proceedings" for a description of current procedures.

# 17.8

# The pension system and the complementary healthcare benefits

#### 17.8.1 Special pension system

The pension system for the electricity and gas industries is a special social security system. Defined within the framework of the IEG employees' status, the special system applies to all employees in the professional branch of the IEG, whether an active or retired beneficiary. It was reformed by the Law of August 9, 2004 concerning both the management and the financing of the system. The special pension system has been managed by the Caisse

Nationale des IEG (CNIEG), since January 1, 2005. This pension and benefit management body has managed the risks of old age but from now on it will also manage the risks of accidents in the workplace, work-related illness, invalidity and death as well as the family compensation for inactive

Title IV of the Law of August 9, 2004 and its implementation decrees set forth the following principles regarding the financing of the special IEG pension system from January 1, 2005:

The sole pension paid by the CNIEG to each IEG retired people is financed:

- partly by the CNAVTS, the AGIRC, and the ARRCO as part of the financing agreements which provide for the affiliation conditions of the IEG special system with the standard mandatory system. The CNIEG pays to the standard mandatory systems the contributions paid by employees and employers of the IEG branch. In exchange, the CNIEG receives from standard mandatory systems, the contributions that would have been paid to the former employees (inactive) of IEG companies if they had been affiliated to the standard mandatory systems, called base systems;
- partly by a percentage of the CTA levy (Contribution Tarifaire d'Acheminement, or "CTA") paid on gas and electricity transmission and distribution calculated within the integrated price;
- the remainder, corresponding to specific rights in relation to the IEGs' retirement, is financed by employers.

The reform of pension finance instituted by the Law of August 9, 2004 has not had any effect on the standard systems, for energy consumers, and for the French State budget.

Without challenging the new funding and management modalities of the special pension fund of the IEG pensioners, a reform of pension rights came into force on July 1, 2008. As in the regime of the administrative employees (Law of August 21, 2003), it mainly consists of introducing the following elements:

- a gradual lengthening of the insurance period in order to benefit from a full pension:
- discount and premium plans depending on the totaled insured period (all systems combined) by the insured;
- a rule of adjustment of pensions now linked to price changes rather than wage evolutions:
- new conditions, which are identical for men and women, in order to qualify for family benefits regarding retirement plans.

These changes as well as the removal of the fifteen years service condition to benefit from a special pension scheme were introduced in Annex 3 of the National Personnel IEG Code by the Decree n° 2008-627 of June 27, 2008. The decree also changed the special disability scheme for IEG pensioners.

In addition, the Decree n° 2008-653 of July 2, 2008, which removes age and nationality conditions in hiring, has introduced various changes to the national status of employees and in particular an age limit to 65 years. The Decree on forced retirement was repealed by Decree n° 2008-1072 of October 20, 2008.

The Decree n° 2008-1514 of December 30, 2008 issued the following provisions applicable from January 1, 2009:

- implementation of an early departure program for long career;
- adjustment of retirement and disability pensions as of April 1st in the same conditions as those applicable to the general regime and the administrative employees regime;
- increase in the premium rate as for other pension schemes;
- removal of the limit to employment/retirement pension accumulation as applicable to the general regime.

Negotiations instigated in the IEG professional branch in November 2007 and carried on in 2008 in order to accompany developments of the special pension scheme covered measures on raising payments, support measures for extended working lives, consideration of special features of certain job functions and improvements in the social protection provisions (supplementary pension, contingency). The coverage of the branch obligatory complementary contingency (death, education annuities) entered into force on January 1, 2009, along with the complementary pension plan established by EDF group in implementing the branch status of February 21, 2008 for statutory employees. The implementation of the Plan d'Epargne Retraite Collectif (PERCO) of EDF group to the France perimeter is scheduled for early 2009. Funding modalities of the complementary pension plan along with the policy of supplementing the PERCO for IEG pensioners will be determined at the level of each company. Finally, branch negotiations on operating services and the consideration of special feature of certain job functions should continue throughout the first half of 2009.

The impact of the pension reform and its accompanying measures on the accounts contained in note 3.1 of the Annex to the consolidated financial statements for the year ended December 31, 2008.

#### 17.8.2 IEG complementary healthcare benefits system

The IEG status instituted for working and retired personnel of the branch, a special healthcare benefits system, a mandatory social security system. The system is managed by the elected representatives of the employees and IEG pensioners. Its management, which was made by the 106 Caisses Mutuelles Complémentaires et d'Action Sociale (CAS) and their Coordination Committee has been gradually transferred to IEG Health Insurance Fund (Caisse d'Assurance Maladie des IEG or CAMIEG). The reintegration process of the agents available to CAS for the management of the special pension scheme and who did not wish to be recruited by the CAMIEG should be completed by the end of 1st quarter 2009.

The system is supervised by the French State, which ensures compliance with the statutory documents, sets out the regulations, the level of contributions and services.

Created on April 1, 2007 CAMIEG is gradually setting up its central services and regional satellite offices, as well as partnerships with the ordinary system. Since July 2008, the Caisse Primaire d'Assurance Maladie des Hauts-de-Seine is processing the healthcare forms for the CAMIEG. However, it is facing operational difficulties related to the centralization of the system and to the shortage of skilled personnel available in this field. Following discussions between partners in the professional branch conducted in several stages, the regulations for the system were modified initially in 2005 by the Decrees of February 15, 2005, on the financing, then a second time in 2007 by the Decree of March 31, 2007, regarding the organization, the management and the governance of the system. Since 2005, the employers have no longer contributed to financing retirement pensions.

In 2007, a branch negotiation has been opened to have supplemental system of medical expenses repayment. This negotiation was suspended during the negotiation on the special pension scheme reform and its accompanying measures. It is expected to resume in 2009.

#### **Remuneration policy**

In order to attract, encourage and develop the loyalty of the abilities that will allow EDF to face future challenges, EDF develops a policy of global remuneration, placing the company on the best practice observed in comparable lines of business.

This policy of global remuneration concerns:

- the recognition of the level of responsibility of the achieved results: wage
- the recognition of collective performance through profit sharing;
- the offer of employee savings and the contribution of the company to this
- employee shareholding;
- social advantages.

#### 17.9.1 Wage policy

In order to respect the economic balance and fixed budgets, the wage policy is led by the will to recognize in an equitable way, the contribution of each person to EDF's success.

Concerning managers, the annual remuneration is completed by a variable part based on individual performance: this principle has been extended to some OETAM's employees (Ouvrier, Employé, Technicien et Agent de

For EDF, in 2008, the average annual gross remuneration was €38,688 (based on 13 months) and €23,660, €31,941, and €53,287 for the employees in the execution, technical areas, and for managers and engineers, against respectively in 2007: €24,087, €31,021 and €52,236 (data relating to 2007 is calculated on a larger perimeter including ERDF).

In the framework of the IEG's special pension system reform, an branch status on wages measures has been entered into on January 29, 2008. It agreement provides an increase of national base salary of 0.2% on January 1, 2007 and 4.31% on January 1, 2008 (of which 2.85% due to the integration in the salary of the retirement compensation premium), the payment of a uniform bonus, the wages structure gradual increase between January 1, 2008 and January 1, 2016, the increase of starting wages for execution young employees (see note 3.1 to the consolidated financial statements for the year ended December 31, 2008).

The agreement also provides measures to accompany professional career extension with the creation of two supplementary longevity step increments with a gradual implementation by 2012 and a derestriction of manager's wages structure by the creation of four new remuneration levels.

#### 17.9.2 Profit-sharing

EDF has had a profit-sharing scheme for its employees for more than 20 years through triennial agreements.

For each beneficiary, profit-sharing is composed of three parts based on criteria and objectives negotiated within its unit, its division and the

Employees can choose either to receive payment and/or put it in the Group's savings plan.

The Agreement 2005-2007 has allowed to pay employees of EDF, RTE and ERDF-EDF Transport €160 million in 2008 for the year 2007. Pursuant to article L. 3314-10 of the French labor code this amount includes an additional collective profit-sharing in relation to the 2007 financial year.

The latest agreement signed in June 2008 covers the years 2008 to 2010. Six performance criteria relating to the Sustainable Development were used for calculating the profit-sharing. The amount of profit-sharing distributed to employees in 2009 will depend, for the national share on the achieved goals associated with these criteria. In addition, the agreement contains specific provisions on the profit share calculation in the event that EDF were to benefit, by decision of the public authorities, from the generally applicable profit-sharing regime. The agreement provides for, in particular, a more moderate profit share to be paid in such a case.

#### 17.9.3 Group Corporate Savings Plan

The Group Corporate Savings Plan (Plan d'Epargne Groupe, or "PEG") is open to employees of EDF and of the Group's French companies in which EDF owns directly or indirectly at least 40% of the share capital and which have signed up to the PEG.

The ISR fund (Investissement Socialement Responsible) established following the agreement of March 30, 2008 will enable members of EDF's Group Savings Plan to invest their savings in a fund investing exclusively in companies that meet social, societal, environmental and governance criteria.

Six mutual funds, including the EDF shares mutual fund (FCPE) and the IRS fund, are now open to subscriptions; they total to an amount outstanding of €3,6 billion by the end of 2008. The amounts from profit-sharing that the employees allocate to the Group Corporate Savings Plan are increased by 100% and voluntary payments are increased by 60% up to €610 and by 35% for the next €610, the whole up to the legal limit.

In 2008, the total gross amount which EDF, ERDF and RTE-EDF Transport contributed amounted to €164 million.

#### 17.9.4 Participation of employees in results

At the submitting date of the filing of this Document de Référence, EDF has not set up any participation scheme, insofar as it is not shown on the list of state-owned companies where participation of employees in the company's profits is compulsory. In 2008, EDF requested its addition to the list of State-owned companies where employee participation is compulsory.

#### 17.9.5 Time savings account (Compte-**Epargne Temps, or "CET")**

In the framework of the social agenda, a CET agreement was signed on April 2, 2008. Beyond the compliance with the law n° 2005-296, of March 31, 2005, it relaxes the using conditions of savings in the form of time and introduces opportunities for monetization.

As of December 31, 2008, the amount of the hours saved in the time savings account by the EDF, ERDF and RTE-EDF Transport's employees reached €404 million

#### 17.9.6 Employee shareholding

At the time of the Company's public offering and more specifically in the framework of the Offer Reserved to Employees pursuant to the law n° 2004-803 dated August 9, 2004 and the law n° 86-912 dated August 6, 1986, 130,000 employees and pensioners became shareholders of the company. The initial subscription application has represented 19.6% of the entire public offering, beyond the ceiling provided by the law (15%). 83% subscribers have been fully served.

At the end of this Offer Reserved to Employees, in France, 75% of EDF's employees became shareholders. In the relevant European subsidiaries, in particular in the United Kingdom, Poland, and Hungary, the subscription rate reached 50%, showing a strong attachment to the EDF group.

In connection with the sale of 2.5% of EDF's capital on December 3, 2007, pursuant to the Law n° 2004-803 of August 9, 2004 and to the Law n° 86-912 of August 6, 1986, an Offer reserved to Employees and Former Employees has been proposed from September 12, to September 22, 2008. The offer affected about 0.4% of the share capital. Despite a particularly unfavorable financial market environment and a displayed price before benefits above market value, the offer has been underwritten by an average of one over two employees of EDF and RTE EDF-Transport and a little more than one over three in ERDF.

Employees and former employees of the EDF group held on December 31, 2008 more than 36.6 million EDF shares, or 2.01% of share capital and 13.3% of the floating capital. Most of the securities held by employees are under the Group Savings Plan, with a deadlock period of 5 years.

Following the award by the State, on January 30, 2009, of perfomance shares to underwriters of the offer reserved for employees of the initial placement offering, employees and former employees of the EDF group held at January 30, 2009 more than 41.3 million shares or 2.27% of the capital.

#### 17.9.7 Stock options

None

#### 17.9.8 Free grants of shares

The Ordinary and Extraordinary Combined Shareholders' Meeting of May 24, 2007, adopted a resolution granting a delegation to the Board of Directors for a period of 12 months in order to proceed to the granting of free Company's ordinary shares, within a limit of 0.2% of the share capital, to employees or directors, or some of them, of the Company or related companies or groups pursuant to article L. 225-197-2 of the French Commercial Code.

The Board of Directors' meeting held on August 30, 2007 prepared a list of beneficiaries and the number of shares to be allocated to each.

The plan for the allocation of bonus shares, called ACT 2007, concerns the allocation of 2,883,183 shares. This is a plan for all Group employees (the main exception being EnBW and Edison employees), i.e., approximately 150,000 beneficiaries spread over twenty-two countries. The distribution procedures for beneficiaries are covered by a collective agreement signed on June 8, 2007, by the three trade unions. This represents on average 19.2 shares per beneficiary employee, with a minimum of ten and a maximum of fifty.

Final allocation of the shares on August 31, 2009 is subject to two conditions:

- Continuous presence during the acquisition period; and
- Achieving a collective performance objective, that is, a year-on-year average increase in the Group's EBITDA (growth excluding the effects of consolidation and with constant accounting principles without taking into account the volatility due to the IAS 32/39 standards application) of a least 3% per annum for the period 2006-2008. This condition is met as of December 31, 2008.

# **Major shareholders**

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# 18.1 Breakdown of share capital and voting rights

As of December 31, 2008, the breakdown of EDF's share capital was as follows:

	Number of Shares	Capital %	Voting rigths %
French State	1,542,738,898	84.66	84.82
Public (institutions and retail investors)	239,497,796	13.15	13.17
Employee shareholding	36,672,396(1)	2.01	2.01
Treasury shares	3,262,000	0.18	-
TOTAL	1,822,171,090	100.00	100.00

<sup>(1)</sup> This figure includes 32,984,022 shares representing 1.81% of capital on the basis of the definition of employee share ownership within the meaning of Article L 225-102 of the Commercial Code (including 32,587,194 shares owned by EDF's current and former employees through mutual fund (FCPE) "EDF Shares" ("Actions EDF") of the EDF group savings plan and EDF group International saving plan. This figure also includes 3,668,374 shares representing 0.20% stake held in pure registered form or administered without delay of non-selling or beyond the periods of non-selling by employee shareholders and former employees.

Following the award by the State on January 30, 2009, of free Company's ordinary shares to underwriters of the offer reserved for employees of initial

public offering, the respective shares of the State and the Employee Share Ownership on January 30, 2009 were:

	% of capital	% of voting rights
State	84.40%	84.55%
Employee share ownership	2.27%(2)	2.27%

<sup>(2)</sup> with 2.02% on the basis of the definition of employee share ownership within the meaning of article L. 225-102 of the French Commercial Code.

# **18.2** Market for the Company's shares

Since November 21, 2005, EDF shares have been listed on Eurolist by Euronext Paris SA.

The following graphic sets forth the development of the trading price of the Company's shares since that date until March 17, 2009:

#### EDF share price from the IPO to March 17, 2009

(Source: Thomson Reuters)





#### Major shareholders

The table hereunder sets forth the development of the Company's share market price from January 2008 until March 17, 2009, inclusively:

	Transa	Transactions		Closing market price in euros	
Listing Period	In millions of shares	In millions of euros (1)	Highest	Lowest	
January 08	58.3	4,324	82.94	64.58	
February 08	54.4	3,651	74.00	61.75	
March 08	54.6	3,173	60.87	54.37	
April 08	48.0	2,956	67.20	58.22	
May 08	34.8	2,386	71.10	66.70	
June 08	37.1	2,389	70.57	59.17	
July 08	43.8	2,383	60.06	50.80	
August 08	35.9	2,005	58.40	53.35	
September 08	52.9	2,675	58.37	47.13	
October 08	60.4	2,576	50.53	36.85	
November 08	31.0	1,428	50.20	40.79	
December 08	33.7	1,374	44.57	37.26	
January 09	26.7	1,061	43.76	37.38	
February 09	39.7	1,315	38.35	30.51	
March 09	23.3	654	28.81	27.31	

<sup>(1)</sup> Transactions in millions of Euros correspond to the monthly sum of the daily number of exchanged securities multiplied by the market closing price of that same day. (Source: Thomson Financial)

#### **Year 2008**

Throughout 2008, EDF's share market price fell by 49.1%, while the French index CAC 40 fell by 42.7% and the sector index Euro Stoxx Utility fell by 38%.

By December 31, 2008, the closing market price of the EDF share was of €41.50 (against €81.48 on December 31, 2007). Its lowest closing market price during 2008 was €36.86 on October 10, and its highest closing market price was €82.94 on January 7.

On December 31, 2008, EDF's market capitalization amounted to €75.6 billion.

#### **Year 2009**

Since the beginning of the year 2009 and until March 17, 2009, EDF's share market price fell by 31.8%, the French index CAC 40 by 14.0% and the sector index Euro Stoxx Utility by 23.7%.

By March 17, 2009, the closing market price of the EDF share was of €28.29 (against €41.50 on December 31, 2008). Its lowest closing market price during 2009 until March 17, was €27.31 on March 13, and its highest closing market price was €43.76 on January 9.

On March 17, 2009, EDF's market capitalization amounted to €51.5 billion.

# **18.3** Agreement which could lead to a change of control

To EDF's knowledge, there is no agreement which could later lead to a change of control.

## **Related party transactions**

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Apart from the information presented below, the details of the transactions concluded by the Company with related parties for the 2008 financial year is mentioned in note 40 to the consolidated financial statements for the year ended December 31, 2008.

# **19.1** Relationships with the French State

As of December 31, 2008, the French State held 84.66% of the share capital and voting rights of EDF. As mentioned in section 4.2.4 ("Risks relating to the structure and changes within the Group") above, modifications to the share capital may not have the effect of reducing the shareholding of the French State to less than the threshold of 70%.

The French State is thus entitled, as any majority shareholder, to control Company decisions requiring the shareholders' approval. In particular, the French State, as the majority shareholder, can in practice influence the result of the shareholders' vote in electing directors and more generally in any question which is subject to the shareholders' vote.

The French Government Shareholding Agency (Agence des Participations de l'Etat, or "APE"), created by the French Decree n° 2004-963 of September 9, 2004, exercises the duties of the French State in its capacity as shareholder in the Company, and, as such, suggests and implements the decisions and orientations of the French State in cooperation with all of the Ministries involved.

In accordance with the legislation applicable to all companies of which the French State is the majority shareholder, EDF may be subject to certain French State inspection procedures, in particular through an economic and financial inspection assignment, pursuant to the French Decree n° 55-733 of May 26, 1955 relating to the economic and financial verification by the French State, and of the French Decree n° 53-707 of August 9, 1953 relating to French State inspection of national public companies and certain entities with an economic or social purpose.

An agreement on the monitoring of external growth investments of the EDF group entered into between the French State and the EDF group on July 27, 2001, imposes procedures with respect to the French State's approval and information (prior or otherwise) for certain Group equity participation, extension or disposal projects. The agreement also implemented a procedure for monitoring the results of these external growth transactions.

EDF is also subject to auditing procedures of the French Court of Auditors (Cour des Comptes) and of the French Parliament. Thus, in addition to the examination carried out by the two auditors, the accounts and the administrative management of the Company and, as appropriate, that of its direct majority subsidiaries, come under the jurisdiction of the French Court of Auditors in accordance with Articles L. 111-4, L. 133-1 and L. 133-2 of the French Code of Financial Jurisdictions (Code des Juridictions Financières). Thus, after examining the accounts, the French Court of Auditors may also request the communication of all documents necessary for accomplishing its auditing mission, and hear any person of its choosing. Finally, the French Statutory Decree of October 30, 1935 organizing the French State's inspection of companies, trade unions and associations or companies of any nature that have received the financial support of the French State, allows the minister in charge of the economy to subject EDF to the verifications of the general finance inspection ("Inspection générale des Finances").

Moreover, the sale of EDF shares by the French State or the dilution of the French State's shareholding in the share capital of EDF is subject to a special procedure pursuant to the applicable regulations, and in particular to the French laws n° 86-793 of July 2, 1986, n° 86-912 of August 6, 1986 and n° 93-923 of July 19, 1993. Finally, like other electricity generators, EDF participates in the multi-year generation investment program decided by the Minister of Energy. This programming sets, in particular, the objectives with regards to the allocation of generation capacities per primary energy source. For more details on the multi-year programming of generation investments, see section 6.5.1.2 ("French legislation") above.

On October 24, 2005, the French State and EDF entered into a contract dealing with the public service commitments assigned to EDF (see section 6.5.1.2 ("French legislation") above).

The French State also intervenes within the framework of the regulation of the electricity and gas markets (see section 6.5.1.2 ("French legislation") above), in particular, for authorizations for planning and operating generation installations and for certificates awarding the right to a purchase obligation, for establishment of regulated tariffs, for the establishment of tariffs for transmission and distribution as well as for the amount of the Contribution to the public service charges for electricity (Contribution aux Charges du Service Public de l'Electricité, or "CSPE").

#### Related party transactions

Finally, EDF supplies electricity to various public sector entities: government services, local authorities and public sector companies. These entities are today eligible customers for which EDF competes with other electricity suppliers. Some of them have exercised their right of eligibility and changed suppliers.

# 19.2 Relationships with GDF Suez

EDF and Gaz de France were created in the form of EPICs pursuant to the French Law of April 8, 1946. Article 5 of this law provides that special conventions could be entered into between the two public companies for the organization of joint services or the transfer to one of these two companies of these services, that are normally within the domain of the other. Pursuant to this law, joint entities have been created within EDF and Gaz de France: the Distribution Division that became EDF GDF Services, the Personnel and Social Relations Division (Direction du Personnel et des Relations Sociales, or "DPRS") which became the National Centre for Assessment and Professional relations ("CNERP") and the Information Technology and Telecommunications Division (Direction Informatique et Télécommunications, or "DIT").

The Law of August 9, 2004 modified Article 5 of the French Law of 1946, which henceforth provides that EDF and Gaz de France, both majority-owned by the French State, were entitled to create joint services by contract. The creation of such services is compulsory in the distribution sector for:

- the building of infrastructures;
- acting as main contractor for works;
- the operation and maintenance of networks;
- meter reading operations; and
- generally, other missions relating to these activities.

The common services thus created may also provide services on behalf of certain other distributors.

Article 27 of the Law of December 7, 2006 concerning the energy sector imposed the creation of a common service to the two subsidiaries, respectively in charge of electricity and gas distribution, with no legal personality.

Following the transfer of supply activities to subsidiaries, the two subsidiaries of EDF (ERDF) and Gaz de France (now, GDF Suez) (GrDF) share a common service in accordance with the legal framework.. For more details regarding the organization of this mixed service, see section 6.2.2.2.4 "ERDF Organization" above.

In addition to the above common service, EDF and GDF Suez to date have only one other service with mixed personnel: Information and Technology Management (Direction Informatique et Télécommunication or DIT) a mixed entity responsible for certain information systems.

Regarding the cooperation between EDF and GDF Suez with respect to the DIT, a partnership agreement was signed on July 1, 2004 in order to specify the nature of the activities and the governance methods of this common

# 19.3 Relationships with the Areva group

See section 4.3 ("Dependency factors").

# 19.4 Relationships with Group entities within the scope of consolidation

EDF has entered into various commercial contracts with its subsidiaries and affiliates. EDF and EnBW, in particular, entered into a cooperation agreement in 2001, which provides for the methods of cooperation between the two companies. This contract was entered into for an unlimited duration, and could not be terminated before 2006

EDF has also entered into cash flow agreements with controlled operating subsidiaries (i.e., excluding Edison, EnBW and Dalkia, see Chapter 7 ("Organizational Structure – Contracts within the Group")). EDF has also granted guarantees to some of its subsidiaries that are mentioned in the Group's consolidated off-balance sheet commitments.

EDF, on one hand and RTE-EDF Transport and ERDF on another hand, have entered into agreements as regard their technical and financial relationships.

The agreements entered into with companies that are proportionally consolidated and with companies that are consolidated under the equity method relate in particular to the sale and purchase of energy.

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#### 20.1 **Historical financial information**

Pursuant to article 28 of the European Commission Regulation 809/2004 of April 29, 2004, the following information is included by reference in the present Docu-

- the consolidated financial statements at December 31, 2006, prepared under international accounting standards, as well as the associated statutory auditors' report, appear respectively in section 20.1 (pages 197 to 289) and 20.2 (page 290) of EDF's 2006 Document de Référence;
- the consolidated financial statements at December 31, 2007, prepared under international accounting standards, as well as the associated statutory auditors' report, which are mentioned in section 20.1 (pages 214 to 315) and 20.2 (page 316) of EDF's 2007 Document de Référence.

The consolidated financial statements at December 31, 2008 (established under IAS-IFRS standards) are set forth below.

# Consolidated financial statements

at December 31, 2008

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#### **Consolidated Income Statements**

(in millions of euros)	Notes	2008	2007
Sales	8	64,279	59,637
Fuel and energy purchases	9	(27,022)	(23,215)
Other external expenses	10	(10,258)	(9,797)
Personnel expenses	12	(10,476)	(9,938)
Taxes other than income taxes		(3,171)	(3,236)
Other operating income and expenses	13	2,083	1,759
Prolongation of the transition tariff system (TaRTAM) - Law of August 4, 2008	14	(1,195)	-
Operating profit before depreciation and amortization		14,240	15,210
Net depreciation and amortization		(5,713)	(5,628)
Net increases in provisions for renewal of property, plant and equipment operated under concession	ns	(526)	(504)
(Impairment) / reversals	15	(115)	(150)
Other income and expenses	16	25	1,063
Operating profit		7,911	9,991
Cost of gross financial indebtedness (1)	17.1	(1,657)	(1,605)
Discount expense	17.2	(2,797)	(2,632)
Other financial income and expenses (1)	17.3	1,287	1,703
Financial result	17	(3,167)	(2,534)
Income before taxes of consolidated companies		4,744	7,457
Income taxes	18	(1,561)	(1,841)
Share in income of companies accounted for under the equity method	24	352	168
Net income from discontinued operations		-	9
Group net income		3,535	5,793
Minority interests		135	175
EDF NET INCOME		3,400	5,618
Earnings per share in euros			
Net earnings per share in euros	31.4	1.87	3.08
Diluted earnings per share in euros	31.4	1.87	3.08

<sup>(1)</sup> The figures published at December 31, 2007 have been reclassified in order to offset the €113 million foreign exchange gain on the borrowing financing the UK subsidiaries, which is included in gross financial indebtedness, by changes in the fair value and the foreign exchange result related to instruments used for economic hedging of that debt, which are included under "Other financial income and expenses" (see note 17.3).

### **Consolidated Balance Sheets**

ASSETS (in millions of euros)	Notes	12.31.2008	12.31.2007
Goodwill	19	6,807	7,266
Other intangible assets	20	3,076	2,421
Property, plant and equipment operated			
under French public electricity distribution concessions	21	41,213	39,982
Property, plant and equipment operated under concessions for other activities	22	26,957	27,151
Property, plant and equipment used in generation and other tangible assets owned by the Group	23	39,245	37,808
Investments in companies accounted for under the equity method	24	2,819	2,530
Non-current financial assets	25	18,103	15,805
Deferred tax assets	18	2,912	1,609
Non-current assets		141,132	134,572
Inventories, including work-in-process	26	9,290	8,678
Trade receivables	27	19,144	16,100
Current financial assets	25	15,329	14,876
Current tax assets	18	992	376
Other receivables	28	8,530	5,243
Cash and cash equivalents	29	5,869	6,035
Current assets		59,154	51,308
Assets classified as held for sale	30	2	269
TOTAL ASSETS		200,288	186,149
EQUITY AND LIABILITIES (in millions of euros)	Notes	12.31.2008	12.31.2007
Capital	31	911	911
Consolidated reserves and income		22,147	26,299
Equity (EDF share)		23,058	27,210
Minority interests		1,784	1,586
Total Equity		24,842	28,796
Provisions for back-end nuclear fuel cycle	32.2	14,686	16,699
Provisions for decommissioning and last cores	32.3	13,886	13,097
Provisions for employee benefits	32.5	12,890	12,240
Other provisions	32.6	1,953	2,002
Non-current provisions	32.1	43,415	44,038
Grantors' rights in existing assets operated under French public electricity distribution concessions	33	19,025	18,227
Grantors' rights in assets to be replaced operated under French public electricity distribution concessions	33	19,491	18,730
Non-current financial liabilities	34.1	25,584	17,607
Other liabilities	38	5,628	5,624
Deferred tax liabilities	18	4,086	4,435
Non-current liabilities		117,229	108,661
Provisions	32.1	4,722	4,696
Trade payables	J2.1	13,957	9,867
Current financial liabilities	34.1	18,958	16,918
Current tax liabilities	٧٦.١	383	391
Other liabilities	38	20,197	16,706
Current liabilities	20	58,217	48,578
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Liabilities related to assets classified as held for sale	30		114

#### **Consolidated Cash Flow Statements**

(in millions of euros)	Notes	2008	2007
Operating activities:			
Income before tax from consolidated companies		4,744	7,457
Impairment	15	115	150
Accumulated depreciation and amortization, provisions and change in fair value		4,673	6,130
Financial income and expenses		1,174	642
Dividends received from companies accounted for under the equity method		110	130
Capital gains/losses		(245)	(860)
Change in working capital		(211)	(269)
Net cash flow from operations		10,360	13,380
Net financial expenses disbursed		(1,068)	(921)
Income taxes paid		(1,720)	(2,237)
Net cash flow from operating activities		7,572	10,222
Investing activities:			
Acquisition of companies, net of cash acquired	6	(281)	253
Purchases of property, plant and equipment and intangible assets	20, 21, 22, 23	(9,703)	(7,490)
Net proceeds from sale of property, plant and equipment and intangible assets	20, 21, 22, 23	214	229
Changes in financial assets	25	(6,895)	1,580
Net cash flow used in investing activities		(16,665)	(5,428)
Financing activities:			
Issuance of borrowings	34	15,717	7,059
Repayment of borrowings	34	(4,882)	(6,357)
Dividends paid by parent company	31.3	(2,438)	(3,170)
Dividends paid to minority interests		(90)	(90)
Capital increase subscribed by minority interests (1)		249	178
Increase in special concession liabilities	33	285	238
Investment subsidies		150	32
Treasury shares		(180)	(6)
Net cash flow from financing activities		8,811	(2,116)
Net increase/(decrease) in cash and cash equivalents		(282)	2,678
Cash and cash equivalents - opening balance		6,035	3,308
Effect of currency fluctuations		<b>(</b> 79)	(42)
Financial income on cash and cash equivalents		188	96
Effect of other reclassifications		7	(5)
CASH AND CASH EQUIVALENTS - CLOSING BALANCE		5,869	6,035

<sup>(1)</sup> Including EDF Énergies Nouvelles (€ 248 million).

#### **Changes in Consolidated Equity**

(in millions of euros)	Capital	Consolidated reserves and net income	Treasury shares	Translation adjustments	Impact of restatement to fair value of financial instruments	Equity (EDF share)	Minority interests	Total Equity
Equity at December 31, 2006	911	21,776	-	310	312	23,309	1,490	24,799
Changes in the fair value of available-for-sale financial assets (1):								
- Gains (losses) taken to equity	-	-	-	-	493	493	1	494
- Transferred to income on sale	-	-	-	-	(200)	(200)	-	(200)
Changes in the fair value of hedging instruments <sup>(2)</sup> :								
- Gains (losses) taken to equity	-	-	-	-	720	720	1	721
- Transferred to income on sale	-	-	-	-	827	827	-	827
Translation adjustments	-	-	-	(450)	-	(450)	21	(429)
Net income recognised directly in equity	-	-	-	(450)	1,840	1,390	23	1,413
Net income	-	5,618	-	-	-	5,618	175	5,793
Total recognised in income for the period	-	5,618	-	(450)	1,840	7,008	198	7,206
Dividends paid	-	(3,170)	-	-	-	(3,170)	(90)	(3,260)
Repurchase of treasury shares	-	-	(38)	-	-	(38)	-	(38)
Sales of treasury shares	-	-	32	-	-	32	-	32
Other changes	-	42	-	22	5	69	(12)	57
Equity at December 31, 2007	911	24,266	(6)	(118)	2,157	27,210	1,586	28,796
Changes in the fair value of available-for-sale financial assets (1):								
- Gains (losses) taken to equity	-	-	-	-	(2,284)	(2,284)	-	(2,284)
- Transferred to income on sale	-	-	-	-	(54)	(54)	-	(54)
Changes in the fair value of hedging instruments	(2):							
- Gains (losses) taken to equity	-	_	-	-	(1,455)	(1,455)	(17)	(1,472)
- Transferred to income on sale	-	-	-	-	247	247	-	247
Translation adjustments (5)	-	-	-	(1,528)	=	(1,528)	(50)	(1,578)
Net income recognised directly in equity	-	-	-	(1,528)	(3,546)	(5,074)	(67)	(5,141)
Net income	-	3,400	-	-	-	3,400	135	3,535
Total recognised in income for the period	-	3,400	-	(1,528)	(3,546)	(1,674)	68	(1,606)
Dividends paid <sup>(3)</sup>	-	(2,438)	-	-	-	(2,438)	(91)	(2,529)
Repurchase of treasury shares	-	-	(441)	-	-	(441)	-	(441)
Sales of treasury shares	-	-	261	-	-	261	-	261
Other changes <sup>(4)</sup>	-	136	-	6	(2)	140	221	361
EQUITY AT DECEMBER 31, 2008	911	25,364	(186)	(1,640)	(1,391)	23,058	1,784	24,842

<sup>(1)</sup> These changes result from fair value measurement, and transfers to income of changes in the fair value of available-for-sale financial assets. They essentially concern EDF and EnBW. In 2008, they reflect the effects of the financial market crisis (see note 25.3.2).

<sup>(2)</sup> These changes correspond to the effects of fair value measurement of hedging instruments and amounts transferred to income in respect of terminated contracts. The € 1,547 million change at December 31, 2007 mainly reflected transfers to income of gains and losses on EDF Energy contracts that were in existence at December 31, 2006 and reached maturity in 2007. The negative € 1,208 million change at December 31, 2008 primarily results from amounts transferred to income in respect of contracts that matured in 2008, and the upturn in prices on the energy markets observed at the end of the year, which led to fair value adjustments of € (1,998) million on coal, electricity and oil product contracts documented as hedges, mainly at EDF, EDF Energy, EnBW, and Edison. This item also includes the € 563 million effect of hedges of net investments in foreign operations by EDF and EDF International.

<sup>(3)</sup> Including interim dividends of €1,164 million and the balance of the 2007 dividend amounting to €1,274 million.

<sup>(4)</sup> Other changes in consolidated equity in 2008 include € 248 million resulting from the capital increase by EDF Énergies Nouvelles, subscribed by minority shareholders.

<sup>(5)</sup> The 2008 translation adjustments mainly concern the fall in the pound sterling against the euro.

#### Notes to the consolidated financial statements

Électricité de France (EDF or the "Company") is a French société anonyme governed by French Law, and registered in France.

The Company's consolidated financial statements include the accounts of the Company and its subsidiaries, and the Group's share in the results of joint ventures and associates (all collectively referred to as the "Group").

The Group is an integrated energy company engaged in all aspects of the energy business: generation, transmission, distribution, supply and trading of energies.

The Group's consolidated financial statements at December 31, 2008 were prepared under the responsibility of the Board of Directors and approved by the Directors at the Board meeting held on February 11, 2009. They will become final after approval at the general shareholders' meeting to be held on May 20, 2009

#### Note

## **Group accounting standards**

1.1 Declaration of conformity and Group accounting policies

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**1.2** Changes in accounting methods at January 1, 2008

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#### **Declaration of conformity and Group accounting policies**

Pursuant to European regulation 1606/2002 of July 19, 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended December 31, 2008 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at December 31, 2008. These international standards are IAS (International Accounting Standards),

IFRS (International Financial Reporting Standards), and interpretations issued by the SIC and IFRIC.

The consolidated financial statements for 2008 contain comparative information for the financial year 2007 prepared under the same accounting

#### 1.2 Changes in accounting methods at January 1, 2008

The accounting and valuation methods applied by the Group in the consolidated financial statements for the year ended December 31, 2008 are identical to those used in the consolidated financial statements for the year ended December 31, 2007.

Two new standards were endorsed by the European Union for application in 2008:

- IFRIC 11, "IFRS 2: Group and Treasury Share Transactions", already applied by the group since 2007;
- Amendments to IAS 39 and IFRS 7 on "Reclassification of financial assets", endorsed by the European Union on October 16, 2008 with application possible from July 1, 2008, which does not apply to EDF and therefore has no impact on the Group's financial statements.

The Group has not opted for early application of the following standards endorsed by the European Union in 2007 and 2008 but not yet mandatory in 2008

- Revised IAS 1, "Presentation of financial statements";
- IFRS 8, "Operating segments". This standard, which will replace IAS 14, requires the entity's financial performance and operating segments to be presented in the form in which they are regularly reviewed by
- Amendment to IAS 23, "Borrowing costs", which removes the option allowing immediate expensing of borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset, and therefore requires such costs to be capitalized as part of the costs of that asset;
- Amendment to IFRS 2 "Vesting Conditions and Cancellations";
- IFRIC 13, "Customer Loyalty Programmes";
- IFRIC 14, "IAS 19 The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction".

These standards, amendments and interpretations will be mandatory from January 1, 2009. Their potential impact is currently being evaluated.

The Group has also decided against early application of the following standards and interpretations, which are expected to be endorsed by the European Union in 2009:

- Revised IFRS 1, "First-time Adoption of International Financial Reporting Standards";
- Amendment to revised IAS 27, "Consolidated and Separate Financial Statements":
- Amendments to IAS 32 and IAS 1 entitled "Puttable financial instruments and obligations arising on liquidation";
- Revised IFRS 3, "Business combinations";
- Amendments to IFRS 1 and IAS 27, "Cost of an investment in a subsidiary, jointly controlled entity or associate";
- Amendments to IAS 39 "Financial instruments: recognition and measurement – Eligible hedged items";
- IFRIC 12, "Service Concession Arrangements" (discussed in note 2.12.1);
- IFRIC 15, "Agreements for the Construction of Real Estate";
- IFRIC 16, "Hedges of a Net Investment in a Foreign Operation";
- IFRIC 17. "Distributions of Non-cash Assets to Owners":
- IFRIC 18, "Transfers of Assets from Customers".

The potential impact of all of these standards, amendments and interpretations is currently being evaluated.

# Note

# Summary of the principal accounting and valuation methods

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The following accounting methods have been applied consistently through all the periods presented in the consolidated financial statements.

#### 2.1 **Valuation**

The consolidated financial statements are based on historical cost valuation, with the exception of certain financial instruments and available-for-sale financial assets, which by convention are stated at fair value.

The methods used to determine the fair value of these instruments are presented in note 2.16.

# 2.2

#### Management judgment and estimates

The preparation of the financial statements requires the use of judgments, best estimates and assumptions in determining the value of assets and liabilities, income and expenses recorded for the period, and positive and negative contingencies at year-end. The figures in future financial statements may differ from current estimates due to changes in these assumptions or economic conditions.

The principal sensitive accounting methods involving use of estimates and judgments are described below. Given their importance in the EDF group's financial statements, the impact of any change in assumption in these areas could be significant.

#### 2.2.1 Nuclear provisions

The measurement of provisions for the back-end of the nuclear cycle, decommissioning and last cores is sensitive to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules. A revised estimate is therefore established at each closing date to ensure that the amounts accrued correspond to the best estimate of the costs eventually to be borne by the Group. Any significant differences resulting from these revised estimates could entail changes in the amounts accrued.

These provisions amount to €29,018 million at December 31, 2008 (€ 30,484 million at December 31, 2007).

A change in the discount rate would be considered as a change in estimate in the same way as a change in disbursement schedule or contractor's quote, and the impacts would be recognized as follows:

- in the corresponding assets if the provision was initially covered by balance sheet assets:
- in the income statement in all other cases.

Such a change could have a significant impact on the consolidated financial statements

#### 2.2.2 Pensions and other long-term and post-employment benefits

The value of pensions and other long-term and post-employment benefit obligations is based on actuarial valuations that are sensitive to assumptions concerning discount rates and wage increase rates, and all the actuarial assumptions used.

These provisions amount to €13,719 million at December 31, 2008 (€13,763 million at December 31, 2007).

Sensitivity analyses are presented in note 32.5.

#### 2.2.3 Impairment of goodwill and long-term assets

Impairment tests on goodwill and long-term assets are sensitive to the macro-economic and segment assumptions used, and medium-term financial forecasts. The Group therefore revises the underlying estimates and assumptions based on regularly updated information.

The net value of goodwill on subsidiaries and joint ventures is €6,807 million at December 31, 2008 (€7,266 million at December 31, 2007).

#### 2.2.4 Financial instruments

In measuring the fair value of unlisted financial instruments (essentially energy contracts), the Group uses valuation models involving a certain number of assumptions subject to unforeseeable developments. Any change in those assumptions could have a significant impact on the financial statements.

#### 2.2.5 Energy and delivery not yet metered

As explained in note 2.7, the quantities of energy delivered but neither measured nor billed are calculated at the reporting date based on consumption statistics and selling price estimates. These statistics and estimates are sensitive to the assumptions used in determining the portion of sales not billed at the closing date.

#### 2.2.6 Valuation of obligations concerning French public distribution concession assets to be replaced

In view of the specific nature of French public electricity distribution concessions, the Group has opted to present its obligation to renew property, plant and equipment in the balance sheet at a value corresponding to the amount of contractual commitments as calculated and disclosed to the grantors in the annual business reports. An alternative approach would be to value the obligations based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life. The impacts this alternative approach would have had on the accounts are shown in note 2.24 for information. Whatever valuation method is used, measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of cost and disbursement dates.

#### 2.2.7 Transition tariff system (Tarif réglementé transitoire d'ajustement du marché or TaRTAM)

To assess the contribution payable by the Group in application of the transition tariff defined in the French laws of December 7, 2006 and August 4, 2008, various assumptions have been used based on the best available information and forecasts, particularly regarding the numbers of customers applying to benefit from this tariff, developments in electricity market prices and the share of the compensation to be financed by the contribution to the public electricity service (Contribution au service public de l'électricité or CSPE) at each reporting date.

#### 2.2.8 Other management judgments

The use of estimates and assumptions is also particularly important in measuring the amounts of the contribution to the public electricity service (CSPE) receivable for the year, and in the recognition of deferred tax assets.

#### 2.3 **Consolidation methods**

Subsidiaries are companies in which the Group has exclusive control and are fully consolidated. Exclusive control means the power to govern the enterprise's financial and operating policies either directly or indirectly so as to obtain benefit from its activities. Exclusive control is presumed when EDF directly or indirectly holds more than 50% of the voting rights. Voting rights that are potentially exercisable at the closing date, even by another party, are taken into consideration in determining the level of control over a subsidiary.

Joint ventures are companies that the Group jointly controls, and are proportionally consolidated on the basis of the Group's percentage interest. Joint control means sharing control over a company jointly operated by a limited number of partners or shareholders, such that the operating and financial policies result from their mutual agreement.

Associates are companies in which the Group exercises significant influence on the financial and operating policies without controlling the company. The Group is considered to exercise significant influence when it holds at least 20% of the consolidated company. Associates are accounted for under the equity method. They are carried in the balance sheet at historical cost adjusted for the share of net assets generated after acquisition, less any impairment. The Group's share in net income for the period is reported under the income statement heading "Share in income of companies accounted for under the equity method".

The results of companies acquired during the year are recognized in the Group's consolidated income statement from the date on which control is acquired, until control is transferred upon disposal.

All significant transactions between consolidated companies and unrealized internal profits are eliminated.

A list of subsidiaries, joint ventures and associates is presented in note 43.

#### Financial statement presentation rules

Assets and liabilities of dissimilar natures or functions are disclosed separately.

Assets and liabilities contributing to working capital used in the entity's normal operating cycle are classified as current. Other assets and liabilities are classified as current if they mature within one year of the closing date, and non-current if they mature more than one year after the closing date.

Commitments by an EDF group entity to purchase minority interests in a fully consolidated entity are reported under current or non-current "Other liabilities", with corresponding adjustments to goodwill and minority interests.

The income statement presents items by nature. The heading "Other income and expenses" presented below the operating profit before depreciation and amortization comprises items of an unusual nature or amount.

# 2.5

#### **Translation methods**

#### 2.5.1 Reporting currency

The Group's financial statements are presented in Euros, which is both the functional and reporting currency of EDF. All financial data are rounded up or down to the nearest million.

#### 2.5.2 Functional currency

An entity's functional currency is the currency of the economic environment in which it primarily operates. In most cases, the local currency is the functional currency, but for some entities, a functional currency other than the local currency may be used provided it reflects the currency used in the principal transactions.

#### 2.5.3 Translation of the financial statements of foreign companies whose functional currency is not the Euro

The financial statements of foreign companies whose functional currency is not the Euro are translated as follows:

- balance sheets are translated into Euros at the closing rate;
- income statements and cash flows are translated at the average rate for the period;

• resulting differences are recognized in equity under the heading "Translation adjustments".

Currency translation differences affecting a monetary item that is an integral part of the Group's net investment in a consolidated foreign company are included in consolidated equity until the disposal or liquidation of the net investment, at which date they are recognized as income or expenses in the income statement, in the same way as other translation adjustments concerning the company.

#### 2.5.4 Translation of transactions in foreign currencies

In application of IAS 21, transactions expressed in foreign currencies are initially translated and recorded in the functional currency of the entity concerned, using the rate in force at the transaction date.

At each reporting date, monetary assets and liabilities expressed in foreign currencies are translated at the closing rate. The resulting foreign exchange differences are taken to the income statement.

#### **Related parties**

Related parties include the French State, companies in which the State holds majority ownership and certain of their subsidiaries, and companies in which EDF exercises joint control or significant influence. They also include members of the Group's management and governance bodies.

#### Sales

Sales essentially comprise income from the sale of energy and services, which mainly include energy transmission and distribution services, and capacity and interconnection auctions.

The Group accounts for sales when:

- · a contract exists;
- delivery has taken place (or the service has been provided);
- a quantifiable price has been established or can be determined;
- and the receivables are likely to be recovered.

Delivery takes place when the risks and benefits associated with ownership are transferred to the buyer.

Energy delivered but not yet measured or billed is calculated based on consumption statistics and selling price estimates.

Sales of goods and revenues on services not completed at the balance sheet date are valued by reference to the stage of completion at that date.

Energy trading operations are recognized net of purchases.

The fees paid by customers upon connection to the network (connection fees) are recorded as deferred income and transferred to sales over a period that depends on the useful life of the assets they contribute to finance, or the estimated term of customer contracts.

# 2.8

#### Income taxes

Income taxes include the current tax expense (income) and the deferred tax expense (income), calculated under the tax legislation in force in the countries where earnings are taxable.

Current and deferred taxes are recorded in the income statement, or in equity if they concern items directly allocated to equity.

The current tax expense (income) is the estimated amount of tax due on the taxable income for the period, calculated using the tax rates adopted at the year-end.

Deferred taxes result from temporary differences between the book value of assets and liabilities and their tax basis. No deferred taxes are recognized for temporary differences generated by:

- goodwill which is not tax deductible;
- the initial recognition of an asset or liability in a transaction which is not a business combination and does not affect the accounting profit or taxable profit (tax loss) at the transaction date;
- investments in subsidiaries, joint ventures and associates, when the Group controls the timing of reversal of the temporary differences, and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets and liabilities are valued at the expected tax rate for the period in which the asset will be realized or the liability settled, based on tax rates adopted at the year-end. If the tax rate changes, deferred taxes are adjusted to the new rate and the adjustment is recorded in the income statement, unless it relates to an underlying for which changes in value are recorded in equity, for example hedging instruments and available-for-sale financial assets

Deferred taxes are reviewed at each closing date, to take into account changes in tax legislation and the prospects for recovery of deductible temporary differences. Deferred tax assets are only recognized when it is probable that the Group will have sufficient taxable profit to utilize the benefit of the asset in the foreseeable future, or beyond that horizon, if there are deferred tax liabilities with the same maturity.

#### **Goodwill and business combinations**

Business combinations are recognized under the purchase method defined in IFRS 3. Purchase cost is the fair value of the assets transferred, liabilities incurred or assumed and equity instruments issued by the purchaser at the acquisition date, plus costs directly attributable to the purchase.

#### 2.9.1 Determination of goodwill

Goodwill corresponds to the difference between the cost of a business combination and the Group's share in the fair value of the identifiable assets, liabilities and contingent liabilities of the company acquired on the date control is transferred. When the difference is negative, it is immediately included in the income statement.

The fair values of assets and liabilities and the resulting goodwill are finalized within 12 months of the acquisition.

When minority interests are acquired in a subsidiary that is already fully consolidated, the Group records goodwill equal to the difference between the acquisition price for the minority shareholdings and the share of net assets acquired, with no revaluation of the assets and liabilities acquired.

If minority interests are acquired in an associate without full control resulting, the Group continues to carry the assets and liabilities acquired previously at the same value in the consolidated financial statements.

#### 2.9.2 Measurement and presentation of goodwill

Goodwill related to companies acquired prior to January 1, 2004 is presented in the balance sheet net of any amortization, under the option allowed by IFRS 1.

Goodwill on acquisition of subsidiaries or joint ventures is disclosed separately in the balance sheet. Impairment on this goodwill is reported under the heading "Impairments", in the income statement.

Goodwill on acquisition of associates is included in the investment's net book value. Impairment on this goodwill is included under the heading "Share in income of companies accounted for under the equity method".

After initial recognition, goodwill is carried at cost less any impairment recognized.

Goodwill is not amortized, but impairment tests are carried out as soon as there is an indication of possible loss of value, and at least annually, as described in note 2.15.

Upon partial or total disposal of a Group entity, the share of goodwill attributable to that entity is included in the gain or loss on disposal.

#### 2.10 Other intangible assets

Other intangible assets mainly consist of software, licenses, trademarks and similar rights, operating rights and development costs. These assets are amortized on a straight-line basis over their useful lives, which are generally between 1 and 5 years.

Other intangible assets also include purchased greenhouse gas emission quotas, which are not amortized.

#### **2.10.1** Research and development expenses

Research expenses are recognized as expenses in the financial period incurred

Development expenses are recognized as an intangible asset if the Group can demonstrate:

- the technical feasibility of making the intangible asset ready for commissioning or sale;
- its intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset;
- how the intangible asset will generate likely future economic benefits;
- the availability of the appropriate resources (technical, financial or other) to complete development and use or sell the intangible asset;
- its ability to provide a reliable estimate of expenses attributable to the intangible asset during its development.

#### 2.10.2 Greenhouse gas emission quotas

The Group applies the following treatment to greenhouse gas emission

- purchased emission quotas are recorded as intangible assets at acquisition cost; when they have been granted for nil consideration by the relevant State under the National Allocation Plan, they are not shown in the balance
- when a Group entity's actual emissions for the year are higher than the quotas allocated by the State less completed transactions on the spot or forward markets for quotas still held in respect of that year, a provision is recorded to cover the excess emissions. This provision is equivalent to the acquisition cost up to the amount of quotas acquired on the spot or forward markets, and based on market prices for the balance.

The provision is cancelled when quotas are surrendered to the State.

Forward purchases and sales of quotas carried out as part of trading activities are recorded in compliance with IAS 39 and stated at fair value at the balance sheet date. Changes in fair value are taken to the income statement.

#### 2.10.3 Renewable energy certificates

When a Group electricity producer or supplier under an obligation to sell a determined quantity of renewable energy is not in a position to meet that obligation at year-end, the Group applies the following accounting treatment:

- energy savings certificates awarded to the entity are not recognized insofar as they do not exceed the level of the obligation;
- certificates purchased are included in intangible assets at cost;

• a provision is established equivalent to the shortfall at the reporting date, proportionally to the period concerned. The value of the provision is based on the acquisition price of certificates already purchased on the spot or forward markets, and the market price or penalty price for the balance. The provision is cancelled when certificates are surrendered to the State.

If the entity has no obligation to sell renewable energy, certificates received or purchased for resale are included in inventories.

#### Concession assets, generation assets 2.11 and other property, plant and equipment

The Group's property, plant and equipment are reported under three balance sheet headings, as appropriate to the business and contractual circumstances of their use:

- property, plant and equipment operated under French public electricity distribution concessions;
- property, plant and equipment operated under concessions for other activities:
- property, plant and equipment used in generation and other tangible assets owned by the Group.

#### 2.11.1 Initial measurement

Property, plant and equipment are recorded at acquisition or production

The cost of facilities developed in-house includes all labor and materials costs, and all other production costs attributable to the construction cost of the asset.

The Group capitalizes safety expenses incurred as a result of legal and regulatory obligations sanctioning non-compliance by an administrative ban from operation.

The cost of property, plant and equipment also includes decommissioning costs for generation plants, and last core costs for nuclear facilities. These assets are associated with the provisions recorded to cover these obligations. At the date of commissioning, they are measured and recorded in the same way as the corresponding provision (see note 2.22). The following components are thus included in the balance sheet value of property, plant and equipment:

- the discounted cost of decommissioning the facilities;
- for nuclear facilities, the discounted cost of last core nuclear fuel, including depreciation of residual reactor fuel that will not be fully irradiated when production shuts down, the cost of nuclear fuel processing and the cost of removing and storing waste from these operations.

Strategic safety spare parts for nuclear facilities are treated as property, plant and equipment, and depreciated pro rata with the useful life of the facilities to which they are assigned.

When a part of an asset has a different useful life from the overall asset's useful life, it is identified as an asset component.

This component approach mainly concerns the costs of the regulatory tenyearly services of nuclear plants, and major scheduled servicing costs which are amortized over a period corresponding to the time elapsing between two services. It also applies to certain parts which have their own specific

Pre-operating expenses and borrowing costs incurred to finance installations are recognized as expenses.

#### 2.11.2 Depreciation

Property, plant and equipment are depreciated on a straight-line basis over their useful life, defined as the period during which the Group expects to draw future economic benefits from their use.

The estimated useful lives for the principal facilities are the following:

- Hydroelectric dams: 75 years
- Electromechanical equipment used in hydropower plants:

Fossil-fired plants:

 Nuclear power plants: · Transmission and distribution installations

(lines, substations):

20 to 45 years.

30 to 45 years

50 years

40 years\*

<sup>\*</sup> More restrictive regulations may apply in some countries.

#### **Concession agreements**

#### 2.12.1 Accounting treatment

The EDF group records public/private agreements in compliance with standards and interpretations IAS 16, IAS 17, IAS 18, IAS 37, IFRS 6 and IFRIC 4 as appropriate to the specific features of those agreements.

The IFRIC issued interpretation IFRIC 12, "Service Concession Arrangements", in November 2006. The process for European Union endorsement of this interpretation continued during 2008, and the Accounting Regulatory Committee approved its adoption on November 6, 2008. IFRIC 12 is expected to be endorsed in 2009.

Based on an analysis undertaken in 2007, the Group considers that application of IFRIC 12 will have only a limited impact on its balance sheet and income statement.

#### 2.12.2 French concessions

In France, the Group is the operator for three types of public service concessions:

- public electricity distribution concessions in which the grantors are local authorities (municipalities or syndicated municipalities);
- hydropower concessions with the State as grantor;
- the public transmission network operated under concession from the State.

#### 2.12.2.1 PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS

#### **GENERAL BACKGROUND**

Since the enactment of the French Law of April 8, 1946, EDF has by law been the sole operator for the main public distribution concessions in France.

The accounting treatment of concessions is based on the concession agreements, with particular reference to their special clauses. It takes into consideration the possibility that EDF may one day lose its status as the sole authorized State concession operator.

These contracts cover terms of between 20 and 30 years, and generally use standard concession rules deriving from the 1992 Framework Contract negotiated with the National Federation of Licensing Authorities (Fédération Nationale des Collectivités Concédantes et Régies – FNCCR) and approved by the public authorities.

#### RECOGNITION OF ASSETS AS PROPERTY. PLANT AND EQUIPMENT OPERATED UNDER FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS

All assets used by EDF in public electricity distribution concessions in France, whether they are owned by the grantor or the operator, are reported together under a specific line in the balance sheet assets at acquisition cost or their estimated value at the transfer date when supplied by the grantor.

#### 2.12.2.2 HYDROPOWER CONCESSIONS

Hydropower concessions in France follow standard rules approved by decree. Assets attributed to the hydropower concessions comprise hydropower generation equipment (dams, pipes, turbines, etc.) and, in the case of recently-renewed concessions, electricity generation and switching

Assets used in these concessions are recorded under "Property, plant and equipment operated under concessions for other activities" at acquisition cost. Recent changes in the regulations following removal of the outgoing operator's preferential right when a concession is renewed (see note 3.4) will lead to changes in estimates that will be used in the financial statements for 2009.

#### 2.12.2.3 FRENCH PUBLIC TRANSMISSION CONCESSION

Following enactment of the French law of February 10, 2000, the public electricity transmission network was operated by an independent entity within EDF. This service was then transferred to a fully-consolidated subsidiary named RTE EDF Transport with effect from January 1, 2005.

A new set of standard rules for the public transmission concession was approved by decree 2006-1731 of December 23, 2006. The amendment to the agreement of November 27, 1958 transferring the concession for the French public electricity transmission network to RTE EDF Transport was signed on October 30, 2008. The concession terminates on December 31, 2051.

The assets operated under this concession belong by law to RTE EDF Transport. They are recorded under "Property, plant and equipment operated under concessions for other activities".

#### 2.12.3 Foreign concessions

The rules governing concessions outside France depend on the contracts and national legislations concerned. Assets operated under concession outside France are recorded under "Property, plant and equipment operated under concessions for other activities", with the exception of prospecting rights and expenses associated with discovery of mineral resources, which are classified as intangible assets. The principal countries concerned are:

#### - United Kingdom

EDF Energy owns public electricity distribution networks. It has a monopoly on the geographical area covered by its license, and the network can be sold at fair value. Licenses may be terminated in the event of breach of obligations, subject to 25 years' notice.

#### - GERMANY

The distribution networks operated under concession by EnBW belong to EnBW for the duration of the concession. In the event that the concession is not renewed, EnBW may transfer the network at fair value or at amortized replacement value.

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#### - ITALY

Edison operates hydrocarbon generation sites, gas storage sites, local gas distribution networks and hydropower generating plants under concessions. It owns all the assets except for some items of property, plant and equipment on the hydropower generation sites, such as pipes, which are transferable for nil consideration upon expiry of the concession.

Hydropower generation assets which will be returned for nil consideration at the end of the concession are depreciated over the duration of the concession

Hydrocarbon generation sites are recorded in compliance with the rules applicable to the sector (see note 2.13).

Assets related to exploration and generation companies and Edison's hydrocarbon concessions are depreciated under the unit of production (UOP) method; expenses associated with discovery of specific mineral resources are amortized over the year.

# 2.13

#### Hydrocarbon prospecting, exploration and generation

The Group applies IFRS 6, "Exploration for and Evaluation of Mineral Resources".

Exploration costs and costs incurred in connection with geological surveys, exploratory testing, geological and geophysical mapping and exploratory drilling are recognized as intangible assets and fully amortized in the year they are incurred.

Development costs related to commercially viable mineral wells and production costs incurred to build facilities to extract and store hydrocarbons are recognized as "Property plant and equipment used in generation and other tangible assets owned by the Group" or "Property, plant and equipment operated under concessions for other activities" as appropriate.

They are amortized under the UOP ("Unit Of Production") method.

# 2.14

#### Leases

In the course of its business, the Group uses assets made available under lease contracts. These contracts are analyzed in the light of the situations described and indicators supplied in IAS 17 in order to determine whether they are finance leases or operating leases.

#### 2.14.1 Finance leases

Lease agreements that effectively transfer virtually all the risks and benefits incident to ownership of the leased assets to the Group are classified as finance leases. The main criteria examined in determining whether virtually all the risks and benefits are transferred by an agreement are the following:

- the ratio of the leased assets' actual useful life to their economic life;
- total future payments as a ratio of the fair value of the financed asset;
- whether ownership is transferred at the end of the lease;
- whether the purchase option is attractive;
- the features specific to the leased asset.

Finance-leased assets are reported under the relevant asset headings, with recognition of a corresponding financial liability: they are depreciated over their useful life, or over the term of the corresponding lease agreement when this is shorter.

If the Group performs a sale and leaseback operation resulting in a finance lease agreement, this is recognized in accordance with the principles described above. If the transfer price is higher than the asset's book value, the surplus is deferred and recognized as income progressively over the term of the lease

#### 2.14.2 Operating leases

Lease agreements that do not qualify as finance leases are classified and recognized as operating leases.

Payments made in application of these agreements are included in expenses in the income statement.

#### 2.14.3 Arrangements containing a lease

In compliance with interpretation IFRIC 4, the Group identifies agreements that convey the right to use an asset or group of specific assets to the purchaser although they do not have the legal form of a lease contract, as the purchaser in the arrangement benefits from a substantial share of the asset's production and payment is not dependent on production or market price.

Such arrangements are treated as leases, and analyzed with reference to IAS 17 for classification as either finance or operating leases.

# Impairment of goodwill, intangible assets and property, plant and equipment

At the year-end and at each interim reporting date, the Group assesses whether there is any indication that any goodwill or asset could have been significantly impaired. If so, an impairment test is carried out as follows:

- the Group measures any long-term asset impairment by comparing the carrying value of these assets and goodwill, classified into cash-generating units where necessary, and their recoverable amount.
  - Cash-generating units (CGU) are groups of homogeneous assets that generate identifiable cash flows benefiting from synergies resulting from the acquisition. The Group's cash-generating units comprise either subgroups or legal entities, broken down where necessary by activity (generation and supply, distribution, transmission, other). Goodwill is allocated to the cashgenerating units (CGU).

The recoverable value of these units is the higher of fair value net of disposal costs, and value in use. Value in use is determined with reference to discounted future net cash flows based on medium-term financial projections. When this recoverable value is lower than the carrying amount in the balance sheet, an amount equal to the difference is booked under the heading "Impairment". The loss is allocated first to goodwill, and any surplus to the other assets of the cash-generating unit concerned;

• the discount rates used for these purposes are based on the weighted

average cost of capital for each asset or group of assets concerned, determined by economic and geographical area and by business segment where appropriate. The pre-tax discount rate is calculated using an iterative process based on after-tax rates;

- future cash flows are based on medium-term plan projections over three years and assumptions validated by the Group. Variables that can significantly affect the calculations are:
  - changes in tariff regulations and market prices,
  - changes in interest rates and market risk premiums,
- market levels and market share on offers, and the level of investment,
- the useful lives of facilities, and the plan for concession renewal,
- the growth rates used beyond the medium-term plans and the terminal values taken into consideration.

Impairment of goodwill is irreversible.

# 2.16

#### Financial assets and liabilities

Financial assets include available-for-sale assets (non-consolidated investments, dedicated assets, and other investment securities), loans and receivables at amortized cost, including trade receivables, and the positive fair value of financial derivatives.

Dedicated assets are financial assets intended to finance the back-end of the nuclear cycle, for which provisions have been accrued (see note 25.3.2.1 and 32.4). These assets are managed separately from the Group's other financial assets and investments in view of their specific objective, and comprise bonds, equities, collective investment funds and "reserved" funds built up by the Group solely for its own use.

Financial liabilities comprise financial borrowings and debts, trade payables, bank credit and the negative fair value of financial derivatives.

Financial assets and liabilities are recorded in the balance sheet as current if they mature within one year and non-current if they mature after one year, apart from derivatives held for trading, which are all classified as current.

Operating debts and receivables, and cash and cash equivalents, are governed by IAS 39 and reported separately in the balance sheet.

#### 2.16.1 Classification and valuation methods for financial assets and liabilities

Financial instruments are classified as follows under IFRS 7:

- financial assets and liabilities carried at fair value with changes in fair value included in income
- held-to-maturity financial assets;
- loans and financial receivables;
- available-for-sale financial assets;
- trade receivables:
- · cash and cash equivalents;
- financial debts and operating debts;
- financial derivatives.

#### 2.16.1.1 FINANCIAL ASSETS AND LIABILITIES CARRIED AT FAIR VALUE WITH CHANGES IN FAIR VALUE INCLUDED IN INCOME

Financial assets carried at fair value with changes in fair value included in the income statement are classified as such at the inception of the operation. This applies to:

- assets acquired from the outset with the intention of resale in the short
- or derivatives not classified as hedges (derivatives held for trading);
- or assets the Group has elected to include in this category under the option allowed by IAS 39.

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These assets are recorded at the transaction date, at acquisition cost including purchasing expenses. At each subsequent reporting date they are measured at fair value, based on quoted prices available from external sources for listed instruments, or using recognized valuation techniques such as the discounted cash flow method or reference to external sources for other

Changes in fair value other than those concerning commodity contracts are recorded in the income statement under the heading "Other financial income and expenses".

Dividends and interest received on assets stated at fair value are recorded in the income statement under "Other financial income".

Changes in the fair value of commodity trading contracts are recorded in the income statement under "Sales".

Changes in the fair value of other commodity contracts designated as derivatives are classified either as "Sales" or "Fuel and energy purchases" depending on the nature of the underlying or the risk hedged.

Regarding the fair value option, the Group classifies an asset or liability as "at fair value through profit or loss" in the three following circumstances:

- (1) when using fair value eliminates or significantly reduces an inconsistency in the measurement of assets and liabilities ("accounting mismatch");
- (2) when the performance of a group of financial assets or financial liabilities is managed on a fair value basis, in accordance with documented strategies and the management reporting system;
- (3) if a contract contains one or more embedded derivatives, then the hybrid instrument may be valued under the fair value option, unless:
  - the embedded derivative does not substantially affect the cash flows of
  - the analysis of the host contract and the embedded derivative does not lead to separate measurement of the embedded derivative.

#### 2.16.1.2 HELD-TO-MATURITY FINANCIAL ASSETS

This category covers fixed-term investments which the Group acquires with the intent and ability to hold to maturity. They are recorded at amortized cost at the transaction date. Interest is calculated at the effective interest rate and recorded in the income statement under the heading "Other financial income and expenses".

#### 2.16.1.3 LOANS AND FINANCIAL RECEIVABLES

Loans and financial receivables are valued and recorded at the transaction date, at amortized cost less any impairment or provision.

Interest is calculated at the effective interest rate and recorded in the income statement under the heading "Other financial income and expenses".

#### 2.16.1.4 AVAILABLE-FOR-SALE FINANCIAL ASSETS

Available-for-sale financial assets comprise non-consolidated investments, reserved funds and investment securities. They are recorded at acquisition cost at the transaction date, and adjusted to fair value at the reporting date.

Fair value measurement is based on quoted prices and market data available from external sources for instruments listed on an active market, and on the discounted cash flow method for other financial instruments. When a fair value cannot be reliably estimated by other accepted valuation methods such as discounting future cash flows, these instruments are valued at acquisition cost less any accumulated impairment.

Unrealized gains or losses on these assets are recorded in equity, unless there is evidence of a realized loss, in which case impairment is recognized in the income statement (see note 2.16.2).

For available-for-sale financial assets represented by debt securities, interest is calculated at the effective interest rate and credited to the income statement under the heading "Other financial income and expenses".

#### 2.16.1.5 FINANCIAL DEBTS AND OPERATING DEBTS

Financial debts are recorded at amortized cost, with separate reporting of embedded derivatives where applicable. Interest is calculated at the effective interest rate and recorded under the heading "Cost of gross financial indebtedness" over the duration of the financial debt. The fair value of the debt is calculated by discounting future cash flows at market rates.

#### 2.16.1.6 DERIVATIVES

#### 2.16.1.6.1 SCOPE

The scope of derivatives applied by the Group corresponds to the principles set out in IAS 39.

In particular, forward purchases and sales for physical delivery of energy or commodities are considered to fall outside the scope of application of IAS 39 when the contract concerned is considered to have been entered into as part of the Group's normal business activity. This is demonstrated to be the case when all the following conditions are fulfilled:

- a physical delivery takes place under all such contracts;
- the volumes purchased or sold under the contracts correspond to the Group's operating requirements;
- the contracts cannot be considered as options as defined by the standard. In the specific case of electricity sale contracts, the contract is equivalent to a firm forward sale or can be considered as a capacity sale.

The Group thus considers that transactions negotiated with a view to balancing the volumes between electricity purchase and sale commitments are part of its business as an integrated electricity company, and do not therefore come under the scope of IAS 39.

In compliance with IAS 39, the Group analyses all its contracts, of both a financial and non-financial nature, to identify the existence of any "embedded" derivatives. Any component of a contract that affects the cash flows of that contract in the same way as a stand-alone derivative corresponds to the definition of an embedded derivative.

If they meet the conditions set out by IAS 39, embedded derivatives are accounted for separately from the host contract at inception date.

### 2.16.1.6.2 MEASUREMENT AND RECOGNITION

Derivatives are initially recorded at fair value, based on quoted prices and market data available from external sources. If no quoted prices are available, the Group may refer to recent comparable transactions or if no such transactions exist base its valuation on internal models that are recognized by market participants, giving priority to information directly derived from observable data, such as over-the-counter listings.

Changes in the fair value of these derivatives are recorded in the income statement, unless they are classified as hedges for a cash flow or net investment. Changes in the fair value of such hedging instruments are recorded directly in equity, excluding the ineffective portion of the hedge.

In the specific case of financial instruments entered into as part of EDF Trading's business, realized and unrealized gains and losses are reported net under the heading "Sales".

### 2.16.1.6.3 FINANCIAL INSTRUMENTS CLASSIFIED AS HEDGES

The EDF group uses derivative instruments to hedge its foreign exchange and interest rate risks, as well as risks related to certain commodity contracts

The Group applies the criteria defined by IAS 39 in classifying derivatives as hedges

- (1) the instrument must hedge changes in fair value or cash flows attributable to the risk hedged, and the effectiveness of the hedge (i.e. the degree to which changes in the value of the hedging instrument offset changes in the value of the hedged item or future transaction) must be between 80% and 125%:
- (2) in the case of cash flow hedges, the future transaction being hedged must be highly probable;
- (3) reliable measurement of the effectiveness of the hedge must be possible;
- (4) the hedge must be supported by appropriate documentation from its inception.

The Group classifies hedges in the following categories:

### (A) FAIR VALUE HEDGES

These instruments hedge the exposure to changes in the fair value of an asset or liability recorded in the balance sheet, or a firm commitment to purchase or sell an asset. Changes in the fair value of the hedged item attributable to the hedged component of that item are recorded in the income statement and offset by corresponding variations in the fair value of the hedging instrument. Only the ineffective portion of the hedge has an impact on income.

### (B) CASH FLOW HEDGES

These instruments hedge highly probable future transactions: the variability in cash flows generated by the hedged transaction is offset by changes in the value of the hedging instrument.

The effective portion of accumulated changes in the hedge's fair value is recorded in equity, and the ineffective portion (i.e. changes in the fair value of the hedging instrument in excess of changes in the fair value of the hedged item) is recorded in the income statement.

When the hedged cash flows materialize, the amounts previously recognized in equity are transferred to the income statement in the same way as for the hedged item.

### (C) HEDGES OF A NET INVESTMENT

These instruments hedge exposure to the foreign exchange risk related to a net investment in a foreign entity. The effective portion of accumulated changes in the hedge's fair value is recorded in equity until disposal of the net investment, when it is included in the gain or loss on disposal. The ineffective portion (defined in the same way as for cash flow hedges) is recorded directly in the income statement.

The hedging relationship ends when:

- a derivative instrument ceases to be an effective hedging instrument;
- a derivative instrument expires, or is sold, terminated or exercised;
- the hedged item expires, is sold or redeemed;
- a future transaction ceases to be considered as highly probable.

Only derivative instruments external to the Group qualify for hedge accounting, and gains or losses on internal derivatives are eliminated in the consolidated financial statements. However, in a cash flow hedging relationship initiated via derivatives internal to the Group, hedge accounting is applied if it can be demonstrated that the internal derivatives will be matched with similar transactions external to the Group.

The Group records the change in fair value resulting from the interest rate effect of derivatives hedging a net investment in a foreign operation in equity in the same way as the change in value resulting from foreign exchange differences.

### 2.16.2 Impairment of financial assets

At the year-end and at each interim reporting date, the Group assesses whether there is any objective evidence that an asset could have been significantly impaired. If so, the Group estimates the asset's recoverable value and records any necessary impairment as appropriate for the category of asset concerned

### 2.16.2.1 FINANCIAL ASSETS RECORDED AT AMORTIZED COST

Impairment is equal to the difference between the asset's net book value and the discounted value of expected future cash flows, using the original effective interest rate of the financial instrument. The impairment is included in the income statement under the heading "Other financial expenses". If the impairment loss decreases in a subsequent period, it is reversed and transferred to the income statement.

### 2.16.2.2 AVAILABLE-FOR-SALE FINANCIAL ASSETS

If there is a significant or long-term decrease in the fair value of availablefor-sale financial assets, the unrealized loss is reclassified from equity to income. If, in a subsequent period, the fair value of an available-for-sale financial asset increases, the increase in value is recorded in equity for equity instruments, while for debt instruments the impairment previously recorded is reversed and transferred to the income statement.

### 2.16.3 Derecognition of financial assets and liabilities

Derecognition is applied for all or part of:

- a financial asset, when the contractual rights making up the asset expire, or the Group substantially transfers most of the significant risks and benefits associated with ownership of the asset;
- a financial liability, when the liability is extinguished due to cancellation or expiry of the obligation. When a debt is renegotiated with a lender giving rise to substantially different terms, a new liability is recognized.

### 2.16.4 Securitization operations

When it can be demonstrated that the Group does not control the investment funds resulting from securitization operations, these are excluded from the scope of consolidation. Otherwise, an entry corresponding to the cash inflow is recorded under the heading "Other liabilities".

# 2.17

### **Inventories and work-in-process**

Inventories are recognized at the lower of acquisition cost or net realizable value, except for inventories resulting from trading activities, which are carried at market value. The cost of inventories is determined by the weighted average unit cost method.

Cost includes all direct material costs, labor costs, and a share of indirect production costs

### 2.17.1 Nuclear fuel and materials

Inventories of nuclear fuel and materials comprise fissile materials in various stages of production, and fuel in the reactor and stored. The processing cycle for nuclear fuels is longer than one year.

The stated value of nuclear fuel and materials and work-in-progress is determined based on direct processing costs including materials, labor and subcontracted services (e.g. fluoration, enrichment, etc.).

In keeping with the notion of "loaded fuel" as defined in the decision of March 21, 2007, in France, the cost of inventories for fuel in reactors but not yet irradiated includes expenses for spent fuel management and long-term radioactive waste management. The corresponding amounts are taken into account in the relevant provisions.

Interest expenses incurred in financing inventories of nuclear fuels are charged to expenses for the period.

Nuclear materials, whatever their form during the processing cycle, whose useful lives are longer than one year, and nuclear fuel, whether being used in the reactors or stored, are recorded in inventories.

These items are valued using the weighted average cost method, applied to each component (natural uranium, fluoration, enrichment, production).

The Group does not value the uranium obtained from processed fuel, due to uncertainty over its future use.

Nuclear fuel consumption is determined for each component based on forecasts of quantities used per kWh produced. These quantities are valued at weighted average cost of inventories.

Inventories are periodically corrected in view of forecast burnt quantities based on neutronic measurements.

### 2.17.2 Consumables, materials and spare parts

Inventories are valued at weighted average cost including direct and indirect purchasing costs.

Provisions concerning spare parts supplied under a maintenance program are based on the turnover of these parts and the useful lives of generation

### 2.17.3 Renewable energy certificates

Renewable energy certificates awarded to or purchased by an entity are included in "Other inventories" when they are not to be surrendered to the State in execution of a regulatory obligation.

### 2.18 **Trade receivables**

On initial recognition, trade receivables are stated at the fair value of the consideration received or to be received. A provision is recorded when their carrying amount, based on the probability of recovery assessed according to the type of receivable, is less than their book value. Depending on the nature of the receivable, the risk associated with doubtful receivables is assessed individually or by experience-based statistical methods.

Trade receivables also include revenue based on an estimate of power already delivered but neither measured nor billed. A provision is booked to cover the potential risk of subsequent non-recovery.

### 2.19 Cash and cash equivalents

Cash and cash equivalents comprise very liquid assets and very shortterm investments, usually maturing within three months or less of the acquisition date, and with negligible risk of fluctuation in value.

Securities held short-term and classified as cash equivalents are recorded at fair value, with changes in fair value included in the heading "Financial income on cash and cash equivalents".

### 2.20 **Equity**

### 2.20.1 Restatement to fair value of financial instruments

The impact of restatement to fair value of financial instruments results from the adjustment to fair value of available-for-sale financial assets and certain hedging instruments.

### 2.20.2 Share issue expenses

Share issue expenses correspond exclusively to external costs expressly related to the capital increase. They are charged against the issue premium at their net-of-tax value.

Other expenses are classified as expenses of the period.

### 2.21 **Treasury shares**

Treasury shares are shares issued by the consolidating company and held either by that company or by other entities in the consolidated group. They are valued at acquisition cost and deducted from equity until the date

of disposal. Income or losses on disposals of treasury shares are directly included in equity and do not affect net income.

### 2.22 **Provisions**

The Group recognizes provisions if the following three conditions are met:

- the Group has a present obligation (legal or constructive) towards a third party that arises from a past event prior to the closing date;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- the obligation amount can be estimated reliably.

Provisions are determined based on the Group's estimate of the expected cost necessary to settle the obligation. Estimates are based on management data from the information system, assumptions adopted by the Group, and if necessary experience of similar transactions, or in some cases based on independent expert reports or contractor quotes. The various assumptions are reviewed for each closing of the accounts.

If it is anticipated that all or part of the expenses covered by a provision will be reimbursed, the reimbursement is recognized under receivables if and only if the Group is virtually certain of receiving it.

It may very rarely happen that a provision cannot be booked due to lack of a reliable estimate. In such cases, the obligation is mentioned in the notes as a contingent liability, unless there is little likelihood of an outflow of resources.

Provisions mainly cover the following:

- back-end nuclear cycle expenses: provisions for spent fuel management and long-term radioactive waste management are booked for all fuel currently in use (in France, the provision concerns all fuel in reactors, regardless of the extent of irradiation; it also covers management expenses for radioactive waste resulting from decommissioning of nuclear plants);
- costs for decommissioning power plants and losses relating to fuel in the reactor when the reactor is shut down (provision for last cores);
- future losses relating to multi-year agreements for the purchase and sale of energy:
  - losses on energy purchase agreements are measured by comparing the acquisition cost under the contractual terms with the forecast market price for electricity,

- losses on energy sale agreements are measured by comparing the estimated income under the contractual terms with the cost of generating the energy to be supplied.

Provisions to cover back-end nuclear cycle expenses, expenses related to the decommissioning of power plants and last cores, and future losses relating to multi-year energy purchase and sale agreements are estimated by applying a forecast long-term inflation index to the projected disbursements, which are then discounted at rates that reflect the best estimate of a long-term rate of return on bond markets.

The rate of inflation and the discount rate are based on the economic parameters of the country where the economic entity is located.

For France, the Group applies a discount rate determined based on long series data for a sample of bonds, and takes into account the fact that some expenses covered by provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The discount effect generated at each closing to reflect the passage of time is recorded under "Discount expense" in financial expenses.

The impact of changes in estimates for long-term provisions with associated balance sheet assets, whether due to schedule changes, discount rate changes, new expense estimates or technological developments, is allocated to the relevant assets, with any excess allocated to the underlying asset (power plant). Each one of these parameters, taken singly or together, could have a considerable impact on the estimates over time.

# 2.23

### **Provisions for employee benefits**

EDF group employees are entitled to benefits both during and after their employment, depending on local regulations and certain specific rules such as the statutory regulations for companies governed by the special pension system for the electricity and gas sector (IEG) in France.

### 2.23.1 Pension and post-employment benefit obligations

When they retire, Group employees benefit from pensions determined under local rules. They may also be entitled to benefits directly paid by the companies, and additional benefits prescribed by the relevant regulations.

All the obligations of EDF and the French subsidiaries governed by the Electricity and Gas sector (IEG) regime are described in note 32.5.2.2.

### 2.23.2 Other long-term benefit obligations

These benefits concern employees currently in service, and are earned according to local regulations, particularly the statutory regulations for the electricity and gas sector for EDF and French subsidiaries covered by the IEG regime. Details are provided in note 32.5.3.

### 2.23.3 Calculation and recognition of employee benefits

Obligations under defined-benefit plans are calculated by the projected unit credit method, which determines the present value of entitlements earned by employees at year-end to pensions, post-employment benefits and long-term benefits, taking into consideration each country's specific economic conditions and expected wage increases.

In calculating pensions and other post-employment benefit obligations, this method takes the following factors into consideration:

- career-end salary levels, with reference to employee seniority, projected salary levels at the time of retirement based on the expected effects of career advancement, and estimated trends in pension levels;
- retirement age, determined on the basis of relevant factors (such as years of service and number of children);
- forecast numbers of pensioners, determined based on employee turnover rates and mortality data available in each country;
- reversion pensions, taking into account both the life expectancy of the employee and his/her spouse and the marriage rate observed for the population of employees in the electricity and gas sector;
- a discount rate that depends on the geographical zone and the duration of the obligations; in compliance with IAS 19, this rate is determined as the market yield on high-quality corporate bonds or the year-end rate on government bonds with a similar duration to EDF's commitments.

The provision takes into account the value of the fund assets that cover the pension obligations, which are deducted from the value of the obligation as determined above.

Any actuarial gains or losses on pensions and post-employment benefit obligations in excess of 10% (the "corridor") of the obligations or fund assets, whichever is the higher, are recognized in the income statement progressively over the average residual working life of the company's employees.

In preparing the opening balance sheet under IFRS at the transition date (January 1, 2004), in application of IFRS 1, actuarial gains and losses on employee benefits that were previously unrecognized under the "corridor" approach were included in the "provision for post-employment benefits", and the corresponding adjustment was recognized in consolidated reserves.

Provisions for other long-term benefits directly include actuarial variances, mainly caused by changes in discount rates, and the past service cost, without application of the "corridor" rule.

The expense booked for employee benefit obligations includes:

- the cost of additional vested benefits, and the financial discount cost of existing benefits;
- the income corresponding to the expected return on fund assets;
- the income or expenses resulting from amortization of actuarial gains or
- the income or expenses related to changes in the benefit systems or introduction of new systems.

### 2.23.4 Share-based payments

Under existing legislation in France, employees of a French group may benefit from attribution of shares. When the State sells some of the capital of a public company, article 11 of the French privatization law of 1986 and article 26 of the law of August 9, 2004 require a share offer to be reserved for current and retired employees of the company. The company being privatized may also set up free share plans.

In the light of IFRS 2, these benefits granted to employees – and former employees – must be treated by the company as personnel expenses in the same way as additional remuneration, and recognized as such with a corresponding adjustment in equity.

Valuation of the benefit granted through a share offer reserved for current and retired employees is based on the difference between the share subscription price and the share price at the grant date, with actuarial valuation of the impact, if any, of the payment terms, the minimum holding period, and the fact that no dividends were received during the vesting period for the free shares.

In the case of free shares, the value of the benefit is based on the share price at the grant date, depending on the number of shares granted and the fact that no dividends were received during the vesting period. The expense is spread over the vesting period.

# 2.24

### **Special concession liabilities**

These liabilities relate to public electricity distribution concessions in France.

These liabilities represent the contractual obligations specific to the concession rules. As of January 1, 2007, they are recognized in the liabilities as:

- rights in existing assets: these correspond to the grantor's right to recover all assets for nil consideration. This right comprises the value in kind of the facilities - the net book value of assets operated under concession less any as yet unamortized financing provided by the operator;
- rights in assets to be replaced: these correspond to the operator's obligation to contribute to the financing of assets due for replacement.

These non-financial liabilities are recorded under the following headings:

- depreciation recorded on the portion of assets financed by the grantor,
- provision for renewal based on the difference between the replacement value at year-end and the historical value of the assets, concerning only assets due for renewal before the end of the concession; the annual allocations to the provision correspond to the difference between the replacement value as measured at each year-end, and the historical value, less any existing provisions. The net amount is spread over the residual useful life of the assets. Consequently, the expenses recognized for a given item increase over time.

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When assets are replaced, the provision and amortization of the grantor's financing recorded in respect of the replaced item are eliminated and transferred to the rights in existing assets, since they are considered as the grantor's financing for the new asset. Any excess provision is taken to income.

During the concession, the grantor's rights in assets to be replaced are thus transferred upon the asset's renewal to become the grantor's rights in existing assets, with no outflow of cash to the benefit of the grantor.

The value of special concession liabilities is determined as follows:

- the grantor's rights in existing assets, representing the share deemed to be held by the grantor in the concession assets, is valued on the basis of the assets recorded in the balance sheet;
- the obligations relating to assets to be replaced are valued on the basis of the estimated value of the relevant assets, measured at each year-end taking into consideration wear and tear on the asset at that date:
  - based on the difference between the asset's replacement value as assessed at year-end and the historical cost for calculation of the provision for renewal (see above),
  - based on the share of the asset's historical cost financed by the grantor, for amortization of the grantor's financing.

The valuation of these liabilities is subject to uncertainty in terms of cost and disbursement dates, among other factors.

The Group considers that the liabilities related to assets to be replaced are to be valued on the basis of the special clauses contained in the concession agreements. Under this approach, these liabilities are stated at the value of the contractual obligations as calculated and reported annually in the reports to the grantors.

If no such clauses existed, an alternative approach would be to state contractual obligations at the discounted value of future payments required for replacement of assets operated under concession at the end of their industrial useful life.

For information, the Group reports below the impacts of this alternative approach, i.e. the discounting of the future obligation to contribute to financing of assets to be replaced.

The principal assumptions used in preparing this simulation are as follows:

- the basis for calculation of the provision for renewal is the estimated replacement value at the end of the asset's useful life, applying a forecast annual inflation rate of 2%, less the asset's historical value. This amount is based on the wear and tear on the asset and discounted at a rate of 4.5%, based on an average duration of 8 years;
- amortization of the grantor's financing is also discounted at the rate of 4.5%.

The following table shows the impacts of this discounting for 2008:

### - IMPACT ON THE INCOME STATEMENT

(in millions of euros)	2008
Operating profit	475
Financial result	(525)
Income before taxes	(50)

### IMPACT ON THE BALANCE SHEET - EQUITY

(in millions of euros and before taxes)	2008
At opening date	1,820
At closing date	1,770

Valuation of concession liabilities under this method, like the previous method, is subject to uncertainty in terms of cost and disbursements, and is also sensitive to changes in inflation and discount rates.

# 2.25

### **Investment subsidies**

Investment subsidies received by Group companies are included in liabilities under the heading "Other liabilities" and transferred to income as and when the economic benefits of the corresponding assets are utilized.

### 2.26 **Environmental expenses**

Environmental expenses are identifiable, additional expenses incurred to prevent, reduce or repair damage to the environment that has been or may be caused by the Group as a result of its business. These expenses are recorded under three headings:

- they are capitalized if they are incurred to prevent or reduce future damage or preserve resources;
- they are booked as environmental liabilities and as allocations to provisions for environmental risks if they correspond to an obligation that exists at
- the year-end and it is probable or certain at the reporting date that they will lead to an outflow of resources to the benefit of a third party, with no equivalent or greater benefit expected from that party subsequent to the year-end;
- they are recognized as expenses if they are operating expenses for the bodies in charge of environmental concerns, environmental supervision, environmental duties and taxes, processing of liquid and gas effluents and non-radioactive waste, or research unrelated to an investment.

### 2.27 Basic and diluted earnings per share

Earnings per share is calculated by dividing the Group's share of net income by the weighted average number of shares outstanding over the period. This weighted average number of shares outstanding is the number of ordinary shares at the start of the year, adjusted by the number of shares redeemed or issued during the year.

This number, and the earnings per share, is adjusted whenever necessary to reflect the impact of translation or exercise of dilutive potential shares (options, subscription warrants and convertible bonds issued, etc.).

# 2.28

### Held-for-sale assets and liabilities and discontinued operations

Assets and liabilities held for sale are disclosed separately from other assets and liabilities in the balance sheet. All income from discontinued operations is disclosed in a single net amount after taxes in the income statement.

Note	Regulatory events in France in 2008	
3	<b>3.1</b> Reform of the special electricity and gas sector (IEG) pension system in France	258
	<b>3.2</b> Prolongation of the transition tariff system (TaRTAM)	260
	<b>3.3</b> French laws on urban solidarity and renewal town planning and habitat	260
	3.4 French laws on water and hydropower	260

### Reform of the special electricity and gas sector (IEG) 3.1 pension system in France

### 3.1.1 Description of the reform

A decree on the special pension system for electricity and gas industry sector (IEG) employees published in France's Official Gazette (Journal Officiel) of January 22, 2008 was issued in accordance with the French Pension Guideline Document (Document d'Orientation sur les Retraites) of October 10, 2007, setting forth the first modifications to the system.

The main provisions of this decree concern:

- prolongation of the IEG employees contribution period to qualify for a full pension, to be raised to 40 years from 2012; subsequent changes will be identical to those applied in the standard public-sector pension system;
- introduction of discounts and premiums in pension rates. The discount takes the form of a financial penalty applied for employees who have not paid contributions over a sufficient period to qualify for a full-rate pension. Conversely, the premium is a pension supplement applicable subject to certain conditions for employees who continue to work after the age of 60 and have paid contributions for 160 quarters;
- indexing of pensions on inflation from January 1, 2009 rather than on the national minimum wage (Salaire National de Base) as currently.

The decree came in force on July 1, 2008 and was supplemented by the decrees of June 27, 2008, July 2, 2008 and October 20, 2008 covering matters such as introduction of a minimum pension, family and conjugal benefits, setting the maximum retirement age at 65, removing the employer's right to set the retirement age, and lifting the "15-year clause" in certain circumstances (before this reform, at least 15 years' employment in the sector were necessary to qualify for an IEG pension).

These decrees have modified the status of IEG employees.

An agreement was signed for the IEG sector on January 29, 2008 as part of this reform, following the principles set forth in the French Pension Guideline Document. This agreement introduces the following main support measures for the changes:

- measures concerning employees' salaries: a 4.31% increase on January 1, 2008 in the national minimum wage applicable to current and retired employees, combined in the case of current employees with elimination of the 2.85% pension contribution compensation bonus, and revision of pay scales, including rises in starting salaries for operative staff;
- initial measures related to longer working lives, such as the definition of additional grades of seniority and changes in the calculation methods for retirement gratuities.

Negotiations concerning certain support measures continued during the second half-year of 2008 as set out in the Guideline Document.

Sector-specific and company-specific agreements were finalized for certain welfare arrangements and the introduction of an additional pension scheme for IEG status employees. These agreements take effect from January 1, 2009 and generate no additional obligation for the Group.

Other agreements are still under discussion on matters such as the how the pension system will take into consideration the specificities of different businesses, and the supplementary health coverage. These remain to be finalized in 2009, and related financial impact if any will be recognized when the agreements are signed.

### 3.1.2 Accounting treatment

The accounting treatment applied considers that:

- the pension reform laws and regulations and the support measures introduced constitute a comprehensive whole, and their impact on the Group's obligations should therefore, in application of IAS 19, "Employee Benefits", be recognized as a single change to the regime for both long-term and post-employment employee benefit obligations, including those indirectly affected by the measures;
- the effective date of all these measures can be set at January 1, 2008.

For post-employment benefits, the impacts of the reform and the support measures are recorded in the income statement as follows:

- the impact on obligations related to vested benefits is recorded in a oneoff entry, at January 1, 2008 because it corresponds to a change in the past
- the impact on obligations related to non-vested benefits is spread over the residual vesting period;
- the impact on benefits that will vest after the date of the reform is included in the current service cost.

For long-term benefits, which are indirectly affected by the support measures, the impact of the changes is included directly in net income for the period.

### 3.1.3 Overall impact of the pension reform and support measures

The new estimations for pension obligations and other "mutualized obligations" at January 1, 2008 for IEG companies were measured by the pension administration body CNIEG (Caisse nationale des Industries électriques et gazières).

For the purposes of the calculations, the EDF group has considered that IEG status employees will change their behavior, extending their working life up to the duration necessary to qualify for a full pension subject to no reduction. However, no pension increase for additional periods worked in excess of the new legal requirement of 40 years has been taken into account.

Any variance between these assumptions and actual employee behavior could have an impact on the financial statements.

### - IMPACT ON PENSION OBLIGATIONS AT JANUARY 1, 2008

The impacts are different for the regulated and deregulated activities, and depend on the vesting period for pension rights.

Specific benefits in the regulated activities (transmission and distribution) vested before January 1, 2005: in principle, the CTA levy (Contribution Tarifaire d'Acheminement) finances these benefits, including the impacts of the reform and the support measures, however it does not cover the impact of the two newly-introduced additional grades, which the Group considers a surplus cost as defined in article 18 of the Law of August 9, 2004. As this surplus cost is to be borne by the companies concerned, the Group has established a €251 million provision, with a corresponding charge in "Other income and expenses" in the income statement.

Specific benefits in the deregulated activities (supply and generation) vested until December 31, 2007 and specific benefits in the regulated activities vested between January 1, 2005 and December 31, 2007: the impact of the reform is recorded at January 1, 2008, the effective date of the reform, in a one-off item of income amounting to €409 million excluding the provision for surplus costs, under "Other income and expenses".

Specific benefits vested from January 1, 2008 (in both the regulated and deregulated activities): the annual amounts recognized as the current service cost are modified from January 1, 2008 and booked under personnel expenses.

### - IMPACT ON OTHER EMPLOYEE BENEFIT OBLIGATIONS AT JANUARY 1, 2008

The accounting treatment of other employee benefit obligations follows the treatment used for pension obligations. When the financial effects of the measures result in a change in vested benefits, they are booked through a one-off entry in 2008 under "Other income and expenses" in the income statement. The pension reform and support measures generated a negative impact of €42 million on non-pension employee benefit obligations.

In addition to their impacts on employee benefit obligations, the pension reform and support measures result in an increase in expenses for 2008.

One of the support measures related to discontinuation of the Pension Contribution Compensation Bonus (Prime de Compensation de la Cotisation Retraite) involves payment of a bonus to each employee, generating an expense of €€ 81 million for the year which is booked under "Other income and expenses".

The impact of the various measures taken in connection with the reform also leads to a €150 million increase in recurring personnel expenses in 2008, mainly corresponding to the effects of pay measures on personnel expenses.

The impact of the pension reform and support measures on the net income before taxes for 2008 can thus be summarized as follows:

IMPACT ON NET INCOME FOR 2008	(108)
Financial expense (discounting)	7
Impact on other income and expenses (1)	35
Support measure: compensation bonus	(81)
Non-pension obligations	(42)
Past specific benefits for the deregulated activities (surplus cost)	(251)
Past specific benefits for the deregulated activities and specific benefits vested since January 1, 2005	409
Impact on operating profit before depreciation and amortization	(150)
Impact on personnel expenses	(150)

- () Figures in parentheses correspond to negative impacts.
- (1) Impacts vary with the category of measures: prolongation of the working life has a positive impact of € 1,916 million, while support measures generate an expense of € 1,549 million, in addition to the € 251 million provision for surplus costs and the compensation bonus amounting to €81 million.

# 3.2

### Prolongation of the transition tariff system (TaRTAM)

French Law 2008-776 of August 4, 2008 on Economic Modernization prolongs the TaRTAM system until June 30, 2010.

In addition to the prolongation of the TaRTAM system, this law also extended eligibility for the transition tariff to all final customers, even those who were previously eligible but had not opted into the system.

As a result of this prolongation, additional provisions of €1,263 million were recorded in the 2008 financial statements to cover EDF's contribution to electricity supplier compensation in 2009 and 2010. This is partially offset (€68 million) by reinvoicing of charges passed on to partners in the nuclear plants.

# 3.3

### French laws on urban solidarity and renewal - town planning and habitat

The implementation provisions for the sections of the French solidarity and urban renewal law (SRU - Solidarité Renouvellement Urbains) and town planning and habitat law (UH – *Urbanisme et Habitat*) concerning connection to the public electricity distribution network introduce a new system, with the following main features:

- definition of connection operations, separating network extension from network connection, with clear identification of the beneficiaries (local authorities in charge of town planning and connected customers);
- establishment of a single invoice price scale for all connection operations;
- direct inclusion of part of the connection price in the delivery tariff, using reduction rates applicable to the basic price scale.

A price scale was proposed to, and approved by, the French energy regulator (CRE – Commission de Régulation de l'Énergie). These new rules were set out in the decision published on November 20, 2008, to take effect from January 1, 2009. Contributions received in execution of this decision will be treated as sales.

# French laws on water and hydropower

Article 7 of the French Law of December 30, 2006 on water and aquatic environments removed the outgoing operator's preferential right instituted by the law of October 16, 1919 on the use of hydropower.

Article 33 of the French Law of December 30, 2006 amending the 2006 France's finance Act set out the principle of an indemnity payable to the outgoing operator in respect of the unamortized portion of investments made by the operator during the second half of the agreement (or a minimum 10-year period), with the exception of investments required to return the assets in good condition at the end of the concession.

The implementation decree of September 26, 2008 clarified the terms of indemnification for work carried out during the second half of the concession and prior to the publication of the decree. The operator has 4 months from publication of the decree to submit a statement of the relevant expenses to the ministry for approval, in order to receive indemnification at the end of the concession.

Once the claim has been approved by the administration, EDF will post the necessary adjustments to the Financial Statements, in particular through accelerated depreciation over the residual term of the agreement of the net book value of assets to be transferred for nil consideration when the concession expires

# Major external growth operations

**4.1** British Energy

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**4.2** Constellation Energy Group (CEG)

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# 4.1

### **British Energy**

### 4.1.1 History of the takeover of British Energy

EDF and British Energy announced on September 24, 2008 that they had signed an agreement on the terms of the takeover bid to be made by Lake Acquisitions Ltd, a wholly-owned subsidiary of the EDF group, for acquisition of all the shares currently issued or yet to be issued by the British Energy group, with the exception of the Special Share held by the British government. Lake Acquisitions Ltd acquired 274,288,774 British Energy shares on September 24, 2008 representing approximately 26.5% of the issued share capital of British Energy, at the price of 774 pence per share, or a total of £2,123 million (€2,679 million).

The financial terms proposed in the offer, which was submitted to the shareholders of British Energy on November 5, 2008, were as follows:

- a Cash Offer of 774 pence per share;
- the "Partial Contingent Value Right (CVR) Alternative" offer limited to 32.28% of the total number of British Energy shares acquired including convertible shares held by the Nuclear Liability Fund (NLF) enabling shareholders residing in certain EU countries to receive 700 pence cash and one CVR-linked Nuclear Power Note in exchange for each share presented. The CVR-linked Nuclear Power Note is a right to a conditional payment to be paid each year between 2010 and 2019.

As the value of this price supplement depends on effective nuclear output and wholesale electricity prices, this alternative offer enables subscribers to retain economic exposure to the nuclear output of British Energy's existing fleet and wholesale electricity prices, subject to certain constraints.

Shareholders opting for the alternative offer could also ask to receive two additional CVR-Linked Nuclear Power Notes for each of their shares, subject to availability, in which case the cash payment would be reduced by 74 pence for each additional CVR-linked Nuclear Power Note received.

The offer by Lake Acquisitions Ltd was made subject to the following

- the acquisition was to concern no less than 75% of the voting rights relating to ordinary shares after acceptance and conversion of the NLF's right to a "Cash Sweep Payment" into shares;
- authorization of the European Commission;
- a declaration by Lake Acquisitions Ltd that to the best of its knowledge, neither the Office of Fair Trading nor the Secretary of State intended to refer the acquisition to the UK Competition Commission;

• a declaration by Lake Acquisitions Ltd confirming that to the best of its knowledge, neither the regulator (Gas and Electricity Markets Authority) nor the nuclear security authority Health and Safety Executive intended to revoke or amend British Energy's nuclear operation license.

On December 22, 2008, the European Commission announced its approval of Lake Acquisitions Ltd's proposed acquisition of British Energy, subject to conditions, principally:

- a commitment to divest certain generation facilities owned by British Energy (the Eggborough coal-fired plant) between September 1, 2009 and March 31, 2010, and by EDF Energy (the gas-fired Sutton Bridge plant) by March 31, 2013;
- termination of one of the group's three electricity transmission agreements at Hinckley Point:
- sale of between 5 and 10 TWh of electricity on the market between 2012 and 2015.
- a commitment for unconditional divestment by EDF of a site with potential for building and operating a new electricity generation facility adjacent to British Energy's existing nuclear plant at either Dungeness or Heysham, at the purchaser's choice.

On January 2 and January 5, 2009 the final conditions attached to the operation were lifted, including the NLF's conversion of its right to a "Cash Sweep Payment" into shares, and its acceptance of the offer in respect of those shares.

Consequently, on January 5, 2009 British Energy attributed 571,204,734 shares to the NLF, representing 35.45% of the enlarged share capital of British Energy, increasing the capital from 1,036,054,899 shares to 1,611,519,535 ordinary shares (assuming total conversion of outstanding warrants 4,259,902 warrants).

The offers were declared fully unconditional at the same date, and Lake Acquisitions Ltd received valid acceptances for 1,275,813,748 shares (207,657,505 in respect of the conditional offer and 571,204,734 in respect of the NLF's convertible shares), representing 79.4% of the enlarged share capital of British Energy. Taking into consideration the shares already acquired by Lake Acquisitions Ltd on September 24, 2008, Lake Acquisitions Ltd's final holding thus totals 96.4% of British Energy's issued share

In compliance with UK stock exchange regulations, Lake Acquisitions Ltd launched a "squeeze out" offer on January 12, 2009 for compulsory purchase of the outstanding shares.

### 4.1.2 Acquisition price

The total acquisition price for British Energy as measured at January 5, 2009, including the 26.5% purchased in September 2008, amounts to £11,998 million (excluding outstanding shares and purchasing expenses), the equivalent of €13,232 million.

This purchase offer led to the following operations at the date of settlement and delivery on January 19, 2009, based on the acceptances received by January 5, 2009:

- a cash payment of £9,586 million;
- issuance of 389,982,701 million CVR-linked Nuclear Power Notes maturing on 2019. These Notes will be listed in 2009, and the Group assessed their fair value on the basis of the terms of the offer (74 pence per CVR).

Most of the financing for the acquisition of British Energy is secured through a syndicated bank loan of £11 billion (€11.6 billion) subscribed on September 23, 2008 including:

- \$5 billion refinanced on the bond market on January 26, 2009 via a private placement with qualified institutional buyers (QIBs) in the US and other investors outside the US. The balance is financed by EDF's available cash resources (see note 42.3);
- €4 billion refinanced on January 23, 2009 by issuance of two bonds (see note 42.3)

### 4.1.3 Accounting treatment in the 2008 consolidated financial statements

As exclusive control of British Energy was only transferred to EDF on January 5, 2009, the date at which the conditions were fulfilled and the offers were declared fully unconditional, British Energy will be fully consolidated in the EDF group's consolidated financial statements from January 2009.

At December 31, 2008, as EDF had no representative on the Board of Directors or significant influence on British Energy's operational and financial policies:

- the shares acquired in September 2008, i.e. 26.5% of the non-enlarged share capital and 17% of the enlarged share capital, are reported under "Available-for-sale financial instruments – equities" at a value of €2,679 million;
- the share purchase commitments resulting from the purchase offer amount to £9,875 million, and are described in note 25.5.1 (Share purchase commitments):
- the syndicated loan of £11 billion is shown in note 34.2.5 (Credit lines).

British Energy's equity at September 30, 2008 as published in November 2008 amounts to £4,590 million.

During 2009, the EDF group will measure the assets and liabilities at fair value at January 5, 2009. The resulting provisional goodwill on the operation will be recorded in the half-yearly financial statements at June 30, 2009, in accordance with IFRS 3.

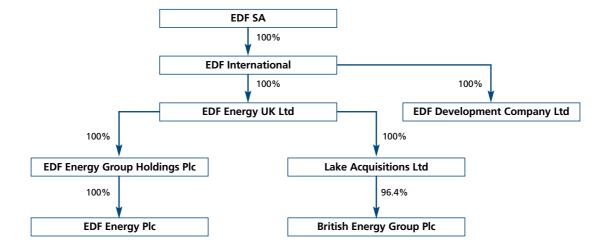
In application of its undertakings to the British government, the EDF group began non-binding discussions with the British gas group Centrica, with a view to transferring 25% of British Energy. These discussions are still ongoing, and Centrica has announced that more than 97% of its shareholders approve the proposal to raise the capital by £2.2 billion in order to part-finance the acquisition of a 25% investment in the capital of British Energy from EDF.

Under the proposed agreement, Centrica would contribute 25% of the financing for construction of new nuclear power plants, and be entitled to draw 25% of non-contractualized electricity generated by the existing nuclear plants.

### 4.1.4 EDF group structure in the UK

Following completion of the offer, all the businesses exercised by British Energy and EDF Energy and the new nuclear assets will be combined into a new entity named EDF Energy UK Ltd.

The structure of the EDF group in the UK is as follows at January 5, 2009:



### 4.1.5 British Energy: key informations

British Energy is the UK's largest electricity generator, employing 6,000 people. It sells its electricity output on the wholesale markets or directly to industrial and commercial customers.

The restructuring agreements of 2005 guarantee that the costs of dismantling British Energy's plants and its pre-2005 back-end nuclear cycle expenses will be paid by a body governed by the UK authorities.

The book value of the British Energy assets and liabilities acquired, as reported in the company's most recent half-year financial statements under IFRS (unaudited) at September 30, 2008 are as follows:

ASSETS (in millions of pounds sterling)	Total	Current	Non-current
Conversion asset	2,084	180	1,904
Property, plant and equipment	1,671	-	1,671
Inventories	496	496	-
NLF and nuclear liabilities receivables	5,662	211	5,451
Goodwill and intangible assets	365	-	365
Trade and other receivables	801	520	281
Restricted cash and other financial assets	250	250	-
Cash and cash equivalents	759	759	<u>-</u>
Derivative instruments and commodity contracts	117	117	
TOTAL ASSETS	12,205	2,533	9,672
LIABILITIES (in millions of pounds sterling)			
Borrowings	516	61	455
Trade and other payables	599	599	-
Current tax liability	29	29	<u> </u>
Retirement benefit obligations	347	-	347
Nuclear liabilities	5,662	211	5,451
NLF liabilities	188	-	188
Deferred income tax liability	5	-	5
Provisions for other liabilities and charges	50	14	36
Deferred income	5	<u> </u>	5
Derivative financial instruments and commodity contracts	214	214	<u> </u>
TOTAL LIABILITIES	7,615	1,128	6,487
Shareholder's equity	4,590	-	4,590
TOTAL EQUITY AND LIABILITIES	12,205	1,128	11,077

The table below presents key figures from British Energy's published annual financial statements:

	2007 <sup>(1)</sup>	2008 (1)
March 31 (in millions of pounds sterling)		
Revenues	2,999	2,811
EBITDA	1,221	882
Net profit for the period attributable to shareholders	465	335

<sup>(1)</sup> Fiscal year ended March 31.

# 4.2

### **Constellation Energy Group (CEG)**

During 2008, further to the existing agreements with CEG, EDF group progressively increased its stake in Constellation Energy from 4.97% to 9.51% through the acquisition of shares on the market for \$619 million (€412 million), bringing the total cost of its investment to €790 million (historical value) at December 2008 (equivalent to an average cost per share of \$68.5).

On December 3, 2008, EDF made an offer to CEG to acquire a 49.99% ownership interest in CEG's nuclear generation business and provide immediate financial support described below.

CEG's Board of Directors accepted this offer and decided to terminate its merger project with MidAmerican on December 17, 2008.

Consequently, EDF and CEG announced on December 17, 2008 that they had reached a final agreement, under which EDF would acquire a 49.99% interest in Constellation Energy Nuclear Group (CENG), an entity to combine all CEG's nuclear generation activities, for \$4.5 billion, equivalent to a pershare value of \$52, in line with recent transactions of a similar nature on the US market. The average quoted price per share for December 2008 on the New York Stock Exchange was \$25.96.

CENG has 3,869 MW of installed capacity, consisting of the Calvert Cliffs Nuclear Power Plant in Maryland, and Nine Mile Point Nuclear Station and R.E. Ginna Nuclear Power Plant in New York State. EDF's interest in CENG will be structured as a new joint venture between the EDF and CEG groups, separate from the existing UniStar joint venture.

Under the terms of this agreement, EDF strengthened CEG's liquidity position through an immediate \$1 billion cash payment in CEG through subscription of non-convertible cumulative preferred stock newly issued by CEG, bearing interest at 8% and maturing no later than June 30, 2010. This preferred stock will be surrendered to CEG upon closing of the transaction and credited against the \$4.5 billion purchase price for EDF's 49.99% interest in CENG, or redeemed on December 30, 2009 for Senior Notes bearing interest at 10% and maturing on June 30, 2010 if the purchase of the 49.99% interest is not completed.

EDF has also contributed \$150 million to the reimbursement of certain transaction costs.

In addition, EDF and CEG have entered into a two-year put option that allows CEG to sell EDF certain non-nuclear generation assets for a value of up to \$2 billion, subject to the required regulatory authorizations. This option concerns eleven assets with combined value of over \$2 billion. The put will remain in effect until December 31, 2010 unless the agreements presented above are terminated earlier by Constellation.

EDF has also granted a \$600 million interim backstop borrowing facility to provide CEG with an additional source of liquidity pending receipt of regulatory authorizations, such that the funds generated by the put option

This borrowing facility will expire when all regulatory authorizations for transfer of the non-nuclear generation assets covered by the put option have been received, or at the latest six months from the date of execution of the agreements with EDF.

EDF and CEG expect to receive the necessary regulatory approvals for the acquisition of EDF's interest in CEG's nuclear generation and operation/distribution business, and therefore complete the transaction, within six to nine months.

No financing condition is contained in the agreement. EDF will draw its financing, including its liquidity commitments, from corporate funds and credit facilities. Approval by CEG's shareholders is not required.

At December 31, 2008, the 8.52% interest in CEG held by EDF group (after deduction of shares remitted by CEG to MidAmerican following the termination Agreement between CEG and MidAmerican) is an integral, nonseparable component of the partnership being developed by EDF and CEG. The agreements of December 17, 2008 guarantee the EDF group a greater role through these investments in the US.

Accordingly, EDF's investment in CEG is valued at \$52 per share, giving a total of €634 million, and impairment of €156 million has been recorded.

# Other major events and transactions

**5.1** Events and transactions in 2008

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**5.2** Significant events and transactions of 2007

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# 5.1

### **Events and transactions in 2008**

### 5.1.1 Consolidation of the structure of financial indebtedness

The EDF group made extensive use of external financing in 2008.

To support the increasingly centralized financing of subsidiaries and the Group's investment program, EDF undertook large-scale issue programs during the year.

The main operations are described below:

- EDF undertook several bond issues placed with French and international institutional investors, principally:
- a €1.5 billion bond issue in January 2008, with maturity of 10 years,
- a €1.8 billion bond issue in May 2008, with maturities of 6 to 12 years,
- a £0.5 billion (€0.6 billion) bond issue in May 2008, with maturity
- a 40 billion yen (€0.2 billion) issue in July 2008, with maturity of 5 years,
- a €2 billion issue in November 2008, with maturity of 4 years and 2 months.
- a CHF1.35 billion (€0.9 billion) bond issue in November and December 2008, with maturity of 5 years,
- a £0.4 billion bond issue (€0.5 billion) in December 2008, with maturity of 14 years;
- RTE EDF Transport also issued bonds in May and August 2008 totaling €1.25 billion and €1 billion and with maturity of 7 and 10 years respectively, in order to refinance part of its debt;
- EnBW undertook two bond issues in November 2008 for a total of €1.5 billion and maturity of 5 and 10 years, to cover its investment program. The transaction was managed by a European banking syndicate.

These issues are part of the Group's policy to increase the average duration of its debt.

### 5.1.2 Volatility on the energy and commodity markets

2008 was a year of significant volatility in market prices. The price rises on the electricity and other commodity markets in the first half-year were followed by a fall in the second half-year driven by the financial and economic crisis. This resulted in high volatility in equity due to the adjustment to fair value of financial instruments used for management of energy market risks, with an impact of €(2,204) million (see note 36.4).

### 5.1.3 The financial market crisis

The financial crisis that first emerged late in the first half-year of 2007 continued throughout 2008, followed by an economic crisis whose effects grew more serious in the final quarter.

This financial crisis is marked by significant declines in share prices and depleting liquidities and bank credit.

The economic crisis is reflected in a marked slowdown in business activity, and falling commodity and energy prices.

Historic volatility levels were observed across all markets.

The consolidated financial statements and management report provide details of the impacts of the crisis on the accounts, and all relevant information as required by law.

This note provides the references to the various documents, chapters and sections referring to this issue for matters related to the financial markets or commodity and energy markets.

The principles applied for classification, measurement and impairment of financial assets and liabilities are presented in note 2.16 to the financial statements. The Group has not opted to reclassify any financial instruments under the amendment to IAS 39 endorsed by the European Commission.

### Consolidated financial statements

A description of the types of financial risk and energy market risk and the Group's management and control framework for those risks can be found in section 1.10 of the Management Report, and note 35 to the financial

The sensitivity analysis required by IFRS 7 is contained in the Management Report:

- Foreign exchange risk: section 1.10.1.3;
- Interest rate risk on financing issued and financial assets: section 1.10.1.4;
- Energy market risks: section 1.10.2;
- Equity risk on financial assets: section 1.10.1.5.

The principal information on financial assets and liabilities are described by theme in the following notes and sections:

- Liquidity risks:
  - Maturity of loans and other financial liabilities: note 34.2.2 to the financial statements,
- Covenants and off balance sheet commitments: note 34.5 to the financial statements,
- Off balance sheet investment commitments: note 25.5 to the financial statements.
- Off balance sheet commitments: section 1.12 of the Management Report;
- Foreign exchange risks:
  - Breakdown of loans by interest rate and currency: note 34.2 to the financial statements:
- Equity risks (Management Report section 1.10.1.5):
  - Coverage of nuclear obligations: notes 25.3.2.1 and 32.4 to the financial statements,
  - Coverage of social obligations: note 32.5 to the financial statements,
  - Long-term cash management,
  - Direct investments;
- Interest rate risks:
- Discount rate for nuclear provisions: calculation method and sensitivity: notes 32.4.1 and 32.4.2 to the financial statements,
- Discount rate for pensions: note 32.5.4 to the financial statements,
- Breakdown of loans by interest rate and currency: note 34.2 to the financial statements:
- Balance sheet treatment of financial and market risks:
  - Derivatives and hedge accounting: note 36 to the financial statements, with direct correspondence to the statement of changes in equity,
  - Derivatives not recorded as hedges: note 37 to the financial statements.

### 5.1.4 EDF-AREVA agreement for management of spent nuclear fuel

On December 19, 2008, EDF and AREVA signed a long-term framework agreement for industrial cooperation (2040), concerning removal of all EDF's spent fuel, the technical and financial conditions of transportation, processing and recycling of the spent fuel (2008-2012), and the amount of the payment for dismantling of AREVA's plant at La Hague.

The agreement clarifies the principles for future cooperation between EDF and AREVA based on two reciprocal commitments:

- AREVA will operate the La Hague plant and the Melox plant until 2040, with the aim of continuous improvement in the industrial and economic performance for the benefit of EDF;
- EDF will use these facilities until 2040 and during that time will rely on AREVA for transportation of spent fuel.

The agreement is a continuation of the longstanding ties between the two companies, which have been based on the following arrangements since EDF's first nuclear power plants were commissioned:

- collection and transportation of spent fuel from EDF power plants to the La Hague plant;
- separation of recyclable fuel material from final residues at La Hague and supply of MOX fuel to the Melox plant;
- conditioning and minimizing the volumes of final residues, by vitrifying long life high-level waste or compacting long-life medium-level waste, for safe interim storage in dedicated installations at La Hague.

The full payment to be made by EDF to AREVA for recovering and conditioning of old waste, final shutdown, and dismantling costs for the La Hague plant is fixed in the industrial cooperation agreement of December 19, 2008 at €2.3 billion at January 1, 2008, based on the economic conditions of December 31, 2007.

As a result of this framework agreement, the amount of the provision for EDF's full payment was reversed and recognized as an operating liability of €1.68 billion excluding taxes, after deduction of the advances EDF has already paid to AREVA.

The two Groups have undertaken to negotiate the terms of a final contract under this framework agreement by December 31, 2009, particularly concerning the practical conditions for settlement of the liability.

### 5.1.5 Capital increase by EDF Énergies Nouvelles

To finance its development in the field of photovoltaic solar power, the EDF Énergies Nouvelles group increased its capital by a final gross amount of €499,540,592 (including the issue premium). This led to issuance of 15,513,683 new shares with nominal value of €1.60 each, delivered on September 30, 2008 at a price of €32.20 each.

The EDF group and the Mouratoglou group, which together own 75.1% of the capital and voting rights of EDF Énergies Nouvelles, used all their rights in the subscription.

### 5.1.6 Partnership agreement with Exeltium

Following in-depth discussions, the European Commission confirmed on July 30, 2008 that the industrial partnership agreement between EDF and Exeltium (a consortium of large electricity-intensive customers) met its requirements regarding compliance with competition laws.

This agreement covers volumes of some 310 TWh spread over 24 years. Its purpose is to make energy supplies more secure for Exeltium, which will have greater visibility over long-term electricity supply prices in return for sharing risks relating to development and operation of EDF nuclear power

The first deliveries of electricity are due to take place as soon as Exeltium has the necessary financing in place.

### **5.1.7 Germany**

On July 10, 2008, EnBW's bid to acquire a 26% stake in EWE AG Oldenburg was accepted, for a total of approximately €2 billion. The transaction remains subject to the approval of the German anti-cartel authorities. It will be financed by equity, principally through bonds issued by EnBW during 2008.

The German regulator Federal Network Agency also notified EnBW of a reduction in gas transmission network access fees, leading the Group to recognize an impairment loss of €166 million in respect of EnBW assets at December 31, 2008.

### Significant events and transactions of 2007

The main events and transactions of 2007 with a significant impact on the financial statements are as follows:

### **5.2.1** France

### 5.2.1.1 APPLICATION OF THE LAW OF JUNE 28, 2006 ON SUSTAINABLE MANAGEMENT OF RADIOACTIVE MATERIALS AND WASTE

The implementing provisions for the law of June 28, 2006 comprise the decree of February 23, 2007, and the decision of March 21, 2007 on the secure financing of nuclear expenses.

They clarify in particular that expenses must be divided into five categories.

Consequently, since 2007, nuclear provisions have been presented as follows:

- provisions for decommissioning;
- provision for spent fuel management, previously the provision for nuclear fuel processing; this also covers expenses for removal and conditioning of old waste.
- provision for long-term radioactive waste management, previously the provision for removal and storage of radioactive waste; this also covers expenses for surveillance once storage is closed.

In the balance sheet, these provisions are presented under two headings:

- provision for back-end nuclear cycle, previously the provision for end of nuclear cycle;
- · provision for decommissioning and last cores.

In application of the same laws, provisions for the long-term management of radioactive waste resulting from decommissioning of EDF's nuclear power plants were reclassified at December 31, 2007 and are now included in the "Provision for long-term radioactive waste management" instead of "Decommissioning provisions".

### **5.2.1.2 TRANSFER OF THE ELECTRICITY DISTRIBUTION BUSINESS TO A SUBSIDIARY**

In application of the French Law of December 7, 2006 on energy, EDF transferred the electric energy distribution business for mainland France to a subsidiary, with legal effect from December 31, 2007.

EDF transferred all the relevant assets to the new company Électricité Réseau Distribution France (ERDF), under the partial business transfer procedure with retroactive effect for accounting purposes to January 1, 2007.

This operation had no impact on the Group's consolidated financial statements, as ERDF is fully consolidated.

### 5.2.2 Germany

Following the corporate tax reform enacted by the German parliament on July 6, 2007, the corporate income tax rate applicable to EnBW was reduced from 38% to 29% from 2008.

In the 2007 financial statements, this reform resulted in a decrease in deferred tax liabilities that generated tax income of €304 million.

The German regulator Federal Network Agency also notified EnBW of an 11% reduction in transmission network access fees, leading the Group to recognize an impairment loss of €143 million (see note 15).

### 5.2.3 Mexico, Argentina

EDF continued its policy of withdrawal from South America, with the sale of its residual 25% holding in Edenor in May 2007, and the sale of its Mexican activities in December 2007, generating a pre-tax gain of €456 million (see note 6.2).

# Changes in the scope of consolidation

**6.1** Changes in the scope of consolidation in 2008

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**6.2** Changes in the scope of consolidation in 2007

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# 6.1

### Changes in the scope of consolidation in 2008

The main changes in the scope of consolidation during 2008 are described below:

### - ITALY

- sale by Edison in April 2008 of seven thermoelectric plants;
- sale on May 1, 2008 of 51% of Dolomiti Edison Energy, owner of three hydropower plants in the Trento province, and on October 24, 2008 of 60% of Hydros, owner of 7 hydropower plants in Bolzano province. Both these companies remain fully consolidated;
- formation of Edison Engineering SA, which is constructing a combined cycle gas plant at Thisvi in Greece.

### - REST OF EUROPE

- sale of Soprolif completed in February 2008;
- purchase by EDF of shares in ECW (Poland) for €54 million after GDF Suez exercised its put option, raising the EDF group's ownership interest from 77.52% to 99.66%;
- various external growth operations by Dalkia International, including acquisition of the Praterm Group in Poland;
- increase in EDF Énergies Nouvelles' investment in Fotosolar (from 45.83% to 90%);

- sale in December 2008 of Clemessy, a company owned by Dalkia Holding, generating a gain of €184 million. The EDF group's share amounts to €63 million and is reported under "Investments in companies accounted for under the equity method";
- acquisition in October 2008 of 100% of Eagle Energy Partners by EDF Trading for \$230 million (€181 million).

The net assets acquired, after fair value adjustments, amount to \$238 million (€184 million).

Eagle Energy Partners operates in the US, specializing in natural gas transmission and storage services, and asset optimization services on the wholesale gas and electricity markets;

- acquisition on December 18, 2008 by EDF Production UK, a wholly-owned subsidiary of EDF, of 80% of the investments held by ATP Oil and Gas UK in three North Sea gasfields for £260 million;
- additional investment in the capital of EDF Investissement Groupe through a €1,806 billion contribution in December 2008 to a capital increase reserved for C3, raising the Group's percentage holding from 66.67% to 84 85%

## Changes in the scope of consolidation in 2007

The main changes in the scope of consolidation during 2007 were the following:

### - GERMANY

- sale by EnBW of its subsidiary U plus, a specialized waste processor, for a price of €35 million, generating a net-of-tax gain of €15 million;
- consolidation changes in the EnBW Group:
- application of the equity method for seven companies, including the 35%-owned Drewag,
- full consolidation of ESW and GSW following acquisitions of additional investments.

### - ITALY

- exercise of Edison warrants reducing the EDF group's ownership interest to 48.96%:
- sale by Edison in February 2007 of its 66.32% investment in Serene, after approval was issued by the competent competition authorities, for
- full consolidation of Thisvi Power Generation Plant in the Edison Group, following acquisition of 65% of its capital in early 2007.

### - OTHER AREAS

- change in consolidation method applied for SSE, which has been proportionally consolidated since January 1, 2007;
- acquisition by Edev of a further 13.77% in Électricité de Strasbourg in September 2007, for €150 million. The resulting goodwill, based on the value of assets and liabilities included in the Group's financial statements, was €126 million;
- full consolidation of Supra and Fahrenheit, proportional consolidation of Sloe, EDF Investissement Groupe and Domofinance, and external growth operations in the Dalkia and EDF Énergies Nouvelles Groups in the "Rest of Europe" segment;
- formation in July 2007 of the Unistar Nuclear Energy group, jointly held 50/50 with the US electricity Group Constellation Energy, to develop EPR-type nuclear power plants in the United States; EDF's initial investment was USD350 million. Unistar Nuclear Energy is proportionally consolidated;
- sale by EDF International on May 4, 2007 of its residual investment in Edenor for USD171 million (€125 million), generating a gain of €€111 million;
- sale by EDF International on December 27, 2007 of its activities in Mexico for €951 million, after repayment of the debt reported in the companies' balance sheets. This sale generated a net-of-tax gain of €376 million; the impact on the Group's net indebtedness was €970 million.

### Note

# Segment reporting

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7.2 Income from external sales by geographical area based on client location

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7.3 Reporting by business segment

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Segment reporting corresponds to the Group's internal organization, reflecting the various risks and rates of return to which the Group is exposed.

Segment reporting is primarily by geographical area, with the "country" risk taking priority over the "business" risk in view of the differences in economic, regulatory and technical environments between the various areas in which the Group operates.

Segment reporting is determined before inter-segment consolidation adjustments and inter-segment eliminations. Inter-segment transactions take place at market prices.

# **7.1**

### Reporting by geographical area

The breakdown used by the EDF group for geographical areas is as follows:

- "France", which refers to EDF and its subsidiaries RTE EDF Transport and ERDF, comprising their regulated activities (mainly Distribution and Transmission) and deregulated activities (mainly Generation and Supply);
- "United Kingdom", which refers to the EDF Energy subgroup;
- "Germany", which refers to the entities of the EnBW subgroup;
- "Italy", which covers all the entities located in Italy, principally the Edison subgroup, TDE, and Fenice;
- "Rest of Europe", which groups together the other European entities, mostly located in continental Europe, and new investments and businesses including Électricité de Strasbourg, Dalkia, Tiru, EDF International, EDF Énergies Nouvelles and EDF Trading;
- "Rest of the World", which covers entities in the US, Latin America and Asia.

# Consolidated financial statements

# 7.1.1 At December 31, 2008

(in millions of euros)	France	United Kingdom	Germany	Italy	Rest of Europe	Rest of the world	Eliminations	Total
External sales	34,264	8,244	7,467	6,042	7,639	623	-	64,279
Inter-segment sales	486	6	42	1	640	1	(1,176)	-
TOTAL SALES	34,750	8,250	7,509	6,043	8,279	624	(1,176)	64,279
OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION	9,020	944	1,114	911	2,045	206	-	14,240
Balance sheet:								
Goodwill	-	1,786	1,405	2,020	1,501	96	-	6,808
Other intangibles and property, plant and equipment	81,111	8,901	6,241	4,974	8,294	970	-	110,491
Investments in companies accounted for under the equity method	20	61	848	25	1,789	76	-	2,819
Other segment assets (1)	23,095	1,651	2,517	1,600	7,831	270	-	36,964
Assets classified as held for sale	-	-	2	-	-	-	-	2
Other non-allocated assets	-	-	-	-	-	-	-	43,204
TOTAL ASSETS	104,226	12,399	11,013	8,619	19,415	1,412		200,288
Segment liabilities (2)	107,857	3,850	7,109	1,702	5,324	237	-	126,079
Liabilities related to assets classified as held for sale	-	-	-	-	-	-	-	-
Other non-allocated liabilities and equity	-	-	-	-	-	-	-	74,209
TOTAL EQUITY AND LIABILITIES	107,857	3,850	7,109	1,702	5,324	237		200,288
Other information:								
Investments in intangible assets and property, plant and equipment	6,003	1,403	572	468	1,932	176	-	10,554
Net depreciation and amortization	(3,922)	(444)	(382)	(453)	(447)	(65)	-	(5,713)
Impairment	(14)	-	(174)	(42)	88	27	-	(115)

### 7.1.2 At December 31, 2007

(in millions of euros)	France	United Kingdom	Germany	Italy	Rest of Europe	Rest of the world	Eliminations	Total
External sales	32,232	8,353	6,900	4,658	6,225	1,269	-	59,637
Inter-segment sales	376	4	25	-	602	1	(1,008)	-
TOTAL SALES	32,608	8,357	6,925	4,658	6,827	1,270	(1,008)	59,637
OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION	9,996	1,285	1,031	910	1,655	333	-	15,210
Balance sheet:								
Goodwill	-	2,320	1,390	2,031	1,435	90		7,266
Other intangibles and property, plant and equipment	78,271	10,328	6,200	4,910	6,747	906	-	107,362
Investments in companies accounted for under the equity method	-	42	817	18	1,578	75	-	2,530
Other segment assets (1)	20,268	2,054	1,790	1,231	4,465	213	-	30,021
Assets classified as held for sale	-	50	2	155	62	-	=	269
Other non-allocated assets	-	-	-	-	-	-	=	38,701
TOTAL ASSETS	98,539	14,794	10,199	8,345	14,287	1,284		186,149
Segment liabilities (2)	100,810	3,409	6,284	1,440	5,437	206	-	117,586
Liabilities related to assets classified as held for sale	-	39	4	38	33	-	-	114
Other non-allocated liabilities and equity	-	-	-	-	-	-	=	68,449
TOTAL EQUITY AND LIABILITIES	100,810	3,448	6,288	1,478	5,470	206		186,149
Other information:								
Investments in intangible assets and property, plant and equipment	5,097	1,183	378	397	1,000	70	-	8,125
Net depreciation and amortization	(3,836)	(475)	(363)	(440)	(411)	(103)	-	(5,628)
Impairment	5	(1)	(146)	(8)	=	-	=	(150)

<sup>(1)</sup> Other segment assets include inventories, trade receivables and other receivables.

<sup>(2)</sup> Segment liabilities include special concession liabilities, provisions for the back-end nuclear cycle, provisions for decommissioning and last cores, provisions for employee benefits, other provisions (excluding provisions for risks associated with investments and provisions for tax risks), trade payables and other liabilities.

# 7.2

# Income from external sales by geographical area based on client location

(in millions of euros)	France	Europe	Rest of the world	EDF Trading	Total
2008	33,868	27,743	1,455	1,213	64,279
2007	31,474	25,505	1,988	670	59,637

### **Reporting by business segment**

The Group's businesses are divided into the following segments:

- Generation/Supply: this segment covers all expertise and assets required to generate energy and sell it to industry, local authorities, small businesses and residential consumers;
- **Distribution**: this consists of managing the low and medium-voltage public distribution network;
- Transmission: this involves operating, maintaining and expanding the high-voltage and very-high-voltage electricity transmission network;
- Other: this category consists of energy services (district heating, thermal energy services, etc.) for industry and local authorities, as well as new segments mainly aimed at boosting electricity generation through cogeneration and renewable energy sources (e.g. wind turbines, solar panels, etc.).

(in millions of euros)	Generation - Supply	Distribution	Transmission	Other	Eliminations (1)	Total
At December 31, 2008:						
External sales:						
- France	21,968	9,031	4,211	140	(1,086)	34,264
- Rest of the world	23,381	2,836	31	3,767	-	30,015
TOTAL SALES	45,349	11,867	4,242	3,907	(1,086)	64,279
Segment assets	74,165	54,922	12,263	15,424	(1,228)	155,546
Non-allocated assets						44,742
Purchases of property, plant and equipment and intangibles	5,459	3,472	854	769	-	10,554
At December 31, 2007:						
External sales:						
- France	20,317	8,551	3,998	196	(830)	32,232
- Rest of the world	21,256	2,126	16	4,007	-	27,405
TOTAL SALES	41,573	10,677	4,014	4,203	(830)	59,637
Segment assets	67,374	54,498	12,051	12,946	(498)	146,371
Non-allocated assets						39,778
Purchases of property, plant and equipment and intangibles	3,490	3,146	802	687	-	8,125

<sup>(1)</sup> Including eliminations of transactions between regulated activities (Distribution and Transmission): € (66) for 2008, € (172) for 2007; Including eliminations of transactions between deregulated activities: € (23) for 2008, € (46) for 2007.

**Sales** 

Sales are comprised of:

(in millions of euros)	2008	2007
Sales of energy and energy-related services	58,255	54,622
Other sales of goods and services	4,800	4,258
Change in fair value of commodity contracts	11	94
Net foreign exchange loss	-	(2)
Trading	1,213	665
SALES	64,279	59,637

Consolidated sales are 7.8% higher than in 2007.

# Note

# **Fuel and energy purchases**



Fuel and energy purchases comprise:

FUEL AND ENERGY PURCHASES	(27,022)	(23,215)
(Increase)/decrease in provisions related to nuclear fuels and energy purchases	2,405	589
Gain/loss on hedging operations	97	102
Transmission and delivery expenses	(2,190)	(2,215)
Energy purchases	(15,797)	(13,454)
Fuel purchases used - power generation	(11,537)	(8,237)
(in millions of euros)	2008	2007

Fuel and energy purchases have increased by €€3,807 million or 16.4% from 2007.

# Other external expenses

Other external expenses comprise:

(in millions of euros)	2008	2007
External services and other purchases	(13,321)	(12,408)
Change in inventories and capitalized production	2,961	2,498
(Increase)/decrease in provisions on other external expenses	102	113
OTHER EXTERNAL EXPENSES	(10,258)	(9,797)

# Note

# **Contractual obligations and commitments**

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# 11.1

### **Purchase commitments**

In the course of its generation and supply activities, the Group has entered into long-term contracts for purchases of electricity, gas, other energies and commodities, as well as nuclear fuels, for periods of up to 20 years.

In almost all cases, these are reciprocal commitments, and the third parties concerned are under an obligation to supply or purchase the quantities specified in the contracts.

EDF has also entered into long-term purchase contracts with a certain number of electricity producers, by contributing to the financing of power plants.

At December 31, 2008, firm irrevocable purchase commitments mature as follows (in millions of current euros):

			12.31.2008			12.31.2007
			Maturity			
(in millions of euros)	Total	< 1 year	1 - 5 years	5 - 10 years	> 10 years	Total
Electricity purchases	15,061	4,023	5,117	3,744	2,177	13,704
Gas purchases (1)	14,467	2,244	6,723	3,343	2,157	12,600
Other energy and commodities purchases	4,711	1,000	1,688	1,485	538	3,558
Nuclear fuel purchases	19,242	1,360	6,031	5,389	6,462	14,501
FIRM AND IRREVOCABLE PURCHASE COMMITMENTS	53,481	8,627	19,559	13,961	11,334	44,363

<sup>(1)</sup> Excluding Edison (see note 11.1.2).

### 11.1.1 Electricity purchases

Electricity purchase commitments mainly concern EnBW and EDF, and are mostly for Island Energy Systems (IES), which has made commitments to purchase the electricity generated using bagasse and coal by ERDF, EDF Energy and RTE EDF Transport.

In addition to the obligations reported above and under article 10 of the Law of February 10, 2000, in mainland France EDF is obliged, at the producer's request and subject to compliance with certain technical features, to purchase the power produced by co-generation plants and renewable energy generation units (wind turbines and small hydro-electric plants, etc). The additional costs generated by this obligation are offset, after validation by the CRE, by the Contribution to the Public Electricity Service (Contribution au service public de l'électricité or CSPE) introduced by the law of January 3, 2003. The purchase obligations covered by the CSPE total 26.7 TWh for 2008 (25.3 TWh for 2007), including 14.0 TWh for co-generation (14.4 TWh for 2007), and 5.1 TWh for wind power (3.9 TWh for 2007).

### 11.1.2 Gas purchases

The Group is involved in independent power plant (IPP) ventures under power purchase agreements (PPA). Gas purchase commitments are mostly related to electric IPPs, covered by electricity purchase agreements received. These agreements include "pass-through" clauses allowing almost all fluctuations in supply source costs to be passed on to the customer.

Other gas purchase commitments have been made by EnBW and EDF as their gas supply businesses expand.

Edison has entered into "take or pay" gas import contracts for final total capacity of 18 billion cubic meters (m<sup>3</sup>) a year once all contracts are in operation. The contracts already in operation concern imports from Russia, Libya, Algeria and Norway, for total supplies of  $9.4\ \text{billion}\ \text{m}^3$  per year. Two new contracts for a total volume of 8.4 billion m<sup>3</sup> per year from Qatar and Algeria will also come into force in the next few years.

The contract with Terminale GNL Adriatico, a gas liquefaction unit due to start operation in mid-2009 in which Edison has a 10% holding, stipulates the following:

- the obligation for Edison to retain its investment until July 1, 2011 at the latest;
- Edison's right to acquire the remaining 90% of the GNL terminal or sell its 10% holding subject to certain conditions;
- the other shareholders' right to buy out Edison's 10% holding in the event Edison ends the supply contract with Rasgas;
- the method for determining the share price if put or call options are exercised:
- the other shareholders' obligation to supply sufficient resources to construct the terminal. Once construction is completed, Edison will benefit from approximately 80% of the terminal's regasification capacities for a 25-year period.

### 11.1.3 Other energy and commodity purchases

Purchase commitments for other energies and commodities mainly concern coal and oil used to operate the fossil-fired plants.

### 11.1.4 Nuclear fuel purchases

Commitments for purchases of nuclear fuel arise from supply contracts for the nuclear plants intended to cover EDF's needs for nuclear fuel and for fluoration, enrichment and fuel assembly production services. The increase in commitments results from the signature of new contracts increasing the period and volume of coverage of EDF's supply needs, and revaluation of uranium supply costs.

### 11.2 **Electricity supply commitments**

EDF has signed several long-term contracts with a number of European electricity operators, undertaking to supply electricity. These contracts are of two types:

- co-financing agreements for nuclear power plants, either for a specific plant or for a defined group of plants. Companies participating in this financing are entitled to a share of the power generated by the plants concerned, in proportion to their initial contribution;
- long-term commercial sales contracts, generally covered by the nuclear power plants.

When it invested in EnBW in 2001, EDF made a commitment to the European Commission to make some of its generation capacity available to the market for an initial duration of 5 years, in principle until February 7, 2006. The purpose of this arrangement was to facilitate competitors' access to the French market, to make up for supply difficulties on the emerging French market over the early years. In 2007, slightly more than 40 TWh was thus made available on the market (41 TWh in 2006).

Since February 2006, EDF has had the right to file a documented application to withdraw from this auction procedure, but has chosen not to exercise this right to date. After discussions with the European Commission and upon a proposal by EDF, the Commission authorized certain adjustments to the auction process, primarily by introduction of baseload products for a period of 4 years, on sale since September 2006, although the volume of energy made available annually by EDF is unchanged.

The auction procedure is therefore still in operation.

Finally, following the dispute between EDF and Direct Energie, the French competition authorities (Conseil de la concurrence) issued a ruling on December 10, 2007 accepting EDF's proposed commitments to tender a significant capacity of electricity (1,500 MW, i.e. approximately 10 TWh per year for 15 years) to alternative suppliers at prices enabling them to compete effectively with EDF's offers on the deregulated mass market.

EDF proposed to apply an average baseload supply price of € 42/MWh in current euros for the initial 5-year period, 2008-2012. This price was set at € 36.8/MWh for the first year, with progressive rises until 2012. For the second 10-year period, the price is to be fixed at a level that covers the development costs of the Flamanville EPR (€ 54/MWh).

These volumes will be allocated by auction, based on 3 calls for tender (2 in 2008 and 1 in 2009).

EDF thus undertook 2 calls for tender for baseload electricity supply contracts on March 12, 2008 and November 19, 2008. The contracts concerned cover a total of 500 MW each, for periods of up to fifteen years.

# 11.3

### **Operating contract commitments and guarantees**

### 11.3.1 Operating contract performance commitments

In the course of its business, the Group provides contract performance guarantees, generally through the intermediary of banks. The Group has also given and received commitments jointly with third parties, maturing as follows at December 31, 2008:

		12.31.2008		12.31.2007	
		Maturity		_	
(in millions of euros)	Total	< 1 year	1 - 5 years	> 5 years	Total
Satisfactory performance, completion and bid guarantees	1,451	541	828	82	616
Commitments related to orders for operating items (1)	4,172	2,269	1,421	482	3,217
Commitments related to orders for fixed assets	11,339	5,655	5,513	171	6,434
Other operating commitments	4,802	2,513	2,128	161	3,682
OPERATING COMMITMENTS GIVEN	21,764	10,978	9,890	896	13,949
OPERATING COMMITMENTS RECEIVED	7,564	5,187	2,097	280	6,166

(1) Other than commodities and energy.

Satisfactory performance, completion and bid guarantees at December 31, 2008 mainly consist of guarantees given by EDF Énergies Nouvelles (€ 999 million) in connection with its development projects, and guarantees related to operation of the London underground system's electric network (€ 52 million) and the construction or operation of power plants in Laos (€ 68 million). The Group has also given other guarantees totaling € 332 million, principally by Dalkia International and EDF.

Firm commitments on operating orders other than commodity and energy purchases and commitments for purchases of property, plant and equipment amount to € 15,512 million (compared to € 9,651 million at December 31, 2007). The increase is most notable at EDF Énergies Nouvelles due to its higher level of investments and business growth, and also concerns EDF and EDF Energy.

The main such commitments concern:

- EDF and ERDF (€ 7,945 million in 2008, € 5,902 million at December 31, 2007): commitments of € 5,385 million undertaken upon signature of capital asset orders (€ 4,129 million at December 31, 2007), including € 1,743 million for construction of the future EPR-type nuclear plant at Flamanville in France;
- Island electricity generation (€ 986 million): commitments mainly undertaken for nuclear plant construction,
- RTE EDF Transport (€ 1,019 million, € 885 million at December 31, 2007);
- EDF Energy (€ 1,187 million, € 115 million at December 31, 2007): commitments for construction of a CCG plant and networks;
- Edison (€ 785 million, € 193 million at December 31, 2007), including € 491 million for the Abu Qir project. Edison has signed a concession agreement for exploration, generation and development rights for offshore fields at Abu Qir, Egypt. The agreement enables Edison to increase current hydrocarbon reserves by 27 billion m<sup>3</sup> of gas equivalents, and raise its annual gas output by 1.1 billion m<sup>3</sup> to 2.6 billion m<sup>3</sup> by 2013;
- EDF Énergies Nouvelles (EEN) (€2,169 million, €1,744 million at December 31, 2007);
- EnBW (€ 875 million, € 314 million at December 31, 2007).

Other operating commitments mainly concern:

- the solidarity commitment undertaken by operators of nuclear power plants in Germany, which would come into force in the event of any one of them being unable to meet its obligations following a nuclear incident. The amount consolidated by the EDF group through EnBW amounts to € 1,034 million (€ 1,034 million at December 31, 2007);
- Edison (€ 613 million, € 613 million in 2007);
- EDF Trading (€ 1,688 million, € 592 million in 2007) for bank guarantees provided to various counterparties in the course of its trading business; the increase mainly results from acquisition of Eagle Energy Partners.

The commitments made to CDC Ixis Capital Markets under the storm risk insurance contract came to an end in December 2008 upon expiry of the contract (€ 240 million at December 31, 2007).

Commitments received mainly concern EDF, and are mostly commitments from insurance companies to cover risks related to construction of the EPR-type nuclear plant. They total €2,843 million (€2,843 million at December 31, 2007).

### 11.3.2 Partnership between EDF and Enel

On November 30, 2007, EDF and Enel signed a strategic partnership agreement, under which Enel bears a 12.5% share of all construction, operation, decommissioning and back-end nuclear cycle expenses for the Flamanville 3 EPR-type nuclear plant, in return for access to 12.5% of the electricity generated by the EPR over its lifetime. The plant's nuclear operator is EDF, which bears full responsibility for its operations.

The partnership agreement also gives Enel the option of progressively acquiring the electricity generated by EDF's nuclear plants, up to a total capacity of 1,200 MW.

# 11.4

## **Operating lease commitments**

The Group is a party to agreements classified as operating leases under IFRIC 4, which account for most of its operating lease commitments as lessor. These agreements mainly concern the Asian IPPs.

The Group is also committed as lessee to irrevocable operating lease contracts for premises, equipment and vehicles used in the course of its business. The corresponding payments are subject to renegotiation at intervals defined in the contracts. EDF, EDF Energy and EDF Trading are the principal entities concerned.

At December 31, 2008, the total expenses and commitments for irrevocable lease payments are as follows:

		12.31.2008		12.31.2007	
	_		Maturity		_
(in millions of euros)	Total	< 1 year	1 - 5 years	> 5 years	Total
Operating lease commitments as lessor	1,662	216	749	697	1,778
Operating lease commitments as lessee	2,593	611	1,442	540	2,709

# **Personnel expenses**

**12.1** Personnel expenses

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12.2 Average workforce

279

# **12.1**

### **Personnel expenses**

Personnel expenses comprise:

(in millions of euros)	2008	2007
Wages and salaries	(6,976)	(6,548)
Social contributions	(1,451)	(1,123)
Employee profit sharing	(244)	(213)
Non monetary benefits	(365)	(340)
Other expenses linked to short-term benefits	(238)	(67)
Short-term benefits	(9,274)	(8,291)
Post-employment benefits	(1,218)	(1,665)
Other long-term expenses	24	70
Free share plan for Group employees	-	(35)
Termination payments	(8)	(17)
Other personnel expenses	16	18
PERSONNEL EXPENSES	(10,476)	(9,938)

• The increase in wages and salaries, particularly in France, results from additional amounts paid in application of the support measures for the electricity and gas industry pension reform, principally the increase in the national minimum wage (see note 3.1).

### "Employee Offering"

On December 3, 2007, the State sold 2.5% of EDF's capital to French and international institutional investors.

In application of article 11 of the law of August 6, 1986 and article 26 of the law of August 9, 2004, following this sale by the State, the company made a preferential offering to current and retired employees of EDF and certain French and foreign subsidiaries. This offering concerned 8 million existing shares to be sold by the French State representing 15% of the total number of shares put on the market, i.e. 0.4% of the capital. The operation comprised two offers providing benefits in the form of free shares, preferential payment terms, and in one of the offers an additional contribution by EDF to the benefit of personnel.

The subscription price was €66 per share. When the offer closed on September 22, 2008, 3.2 million shares had been subscribed. Settlement and delivery took place on October 30, 2008.

This offering is recorded in personnel expenses at a value of € 52 million (not including social security charges on the contribution paid by foreign entities), including an amount of € (7) million charged to equity, which corresponds to the value of the non-monetary benefit granted to employees.

• A free share plan (named ACT 2007) was approved by the General Shareholders' Meeting of May 24, 2007. The final conditions for allotment of shares, particularly the list of beneficiaries in the Group companies concerned by this operation and the number of shares to be received by each beneficiary, were defined and approved at the Board of Directors' meeting held on August 30, 2007. The shares will be delivered on August 31, 2009 to employees who had a contract with the company for the entire vesting period (apart from exceptions as specified in the plan), subject to achievement of performance objectives for the period 2006-2008. 2.9 million shares had been granted at August 30, 2007.

This plan is stated at the fair value of shares at their grant date (€ 72.50 per share at August 30, 2007), based on the EDF share price at that date, together with the other actuarial assumptions applied.

The expense recognized for 2008 is proportionate to the portion of the vesting period elapsed: € 100 million of an estimated total of € 203 million.

# 12.2

# **Average workforce**

	2008	2007
IEG status	102,689	103,855
Other	53,242	50,178
TOTAL	155,931	154,033

Average workforce numbers are reported on a full-time equivalent basis.

Personnel corresponding to proportionally consolidated companies included pro rata with the Group's percentage interest represent the equivalent of 28,204 full-time employees at December 31, 2008 (26,280 full-time equivalent employees at December 31, 2007).

# Note

# Other operating income and expenses

Other operating income and expenses comprise:

(in millions of euros)	2008	2007
Operating subsidies	1,898	2,024
Provision for electricity generators' contribution to the TaRTAM except prolongation until June 30, 2010 <sup>(1)</sup>	(17)	(248)
Net income on deconsolidation	61	46
Gains on disposal of property, plant and equipment	(46)	(47)
Net increase in provisions on current assets	(111)	2
Net increase in provisions for operating contingencies and losses	352	80
Other operating income and expenses	(54)	(98)
OTHER OPERATING INCOME AND EXPENSES	2,083	1,759

<sup>(1)</sup> Transition tariff system (Tarif réglementé transitoire d'ajustement de marché).

### Consolidated financial statements

Operating subsidies mainly comprise the subsidy received by EDF in respect of the Contribution to the Public Electricity Service (CSPE) introduced by the French Law of January 3, 2003. This contribution is payable by endusers (both eligible and non-eligible) and collected by network operators or electricity suppliers, which then pay it to the State. Since January 1, 2005, the additional costs resulting from the basic necessity tariff (tarif de première nécessité) and the poverty and vulnerability action measures are also included in subsidies.

In the financial statements, this compensation results in recognition of income of €1,876 million net of hedging derivatives for 2008 (€ 1,864 million for 2007). This decrease is due to the rise in market prices for electricity between the two periods.

The CSPE income receivable is valued on the basis of the most probable assumptions, assessed at December 31, 2008.

The law of December 7, 2006 introduced a transition tariff system (tarif réglementé transitoire d'ajustement du marché).

This tariff was automatically applicable in mainland France for two years from the date of initial application for all end-users of electricity, provided they made a formal request to their supplier by July 1, 2007. The decision of January 3, 2007 states that this transition tariff is equal to the regulated sales tariff, excluding taxes, plus 10%, 20% or 23% depending on the type of end-user electing to benefit from the transition tariff system.

Suppliers providing customers with electricity at this tariff at the customer's request, even though they are unable to generate or purchase the electricity supplied at a lower rate, receive compensation for the differential between the cost of the electricity supplied and the income corresponding to supply at the transition tariff system.

This compensation paid to electricity suppliers is financed by a share of the Contribution to the Public Electricity Service (Contribution au service public de l'électricité or CSPE), and a contribution paid by nuclear and hydropower generators who exceed certain generation levels (this includes EDF), up to the limit of € 3/MWh. The amount of the electricity generators' contribution is calculated such that, taken together with the CSPE, it covers all expenses borne by suppliers.

A provision of € 470 million was booked in the Group's financial statements at December 31, 2006 to cover EDF's contribution to the compensation for electricity suppliers introduced by the transition tariff system over the two years concerned by the system. Following adjustment of the underlying assumptions (see note 2.2.7), a further amount of €248 million was added to the provision during 2007, and € 17 million during 2008. The effect of prolongation of the TaRTAM system to June 30, 2010 in application of the law of August 4, 2008 on economic modernization is described in note 14.

The same law also extended eligibility for the transition tariff system to all final customers, even those who had not yet opted into the system.

Other operating income and expenses for 2008 include the effects of:

- non-recurring services by EDF totaling €171 million (income);
- the administrative court ruling of July 4, 2008 in the litigation between RTE EDF Transport and the SNCF over the rental due for use of the high-voltage electricity network which previously belonged to SNCF. RTE has decided to appeal against this decision and apply for suspended execution (expense);
- expiry on December 17, 2008 of a index-linked storm-damage insurance policy. Under the terms of this policy, a portion of the premiums paid was recoverable. Since no storm had exceeded the indemnification level during the period covered by the insurance, the reserve was repaid to ERDF and recognized as other operating income of € 137 million.

Operations of an unusual amount or nature are reported in "Other income and expenses" (see note 16).

# Note

# Prolongation of the transition tariff system (TaRTAM) - Law of August 4, 2008

Additional provisions of €1,263 million were recorded in the 2008 financial statements to cover EDF's contribution to electricity supplier compensation in 2009 and 2010 as a result of prolongation of the transition tariff system (tarif réglementé transitoire d'ajustement du marché - TaRTAM) to June 30, 2010. As explained in note 2.2.7, this amount is estimated based on the Group's best available information and forecasts, using a series of assumptions subject to unforeseeable developments. It is partially offset (€ 68 million) by reinvoicing of charges passed on to partners in the nuclear plants.

# Impairments / reversals

Details of impairments recognized and reversed are as follows:

(in millions of euros)	2008	2007
Impairment on goodwill	-	(68)
Impairment on property, plant and equipment	(218)	(93)
Reversals	103	11
IMPAIRMENT NET OF REVERSALS	(115)	(150)

The net-of-tax weighted average cost of capital referred to for impairment tests was in the following ranges:

- 4.7% to 4.9% for regulated activities in the Euro zone (4.7% to 5.3% in 2007):
- 7% to 7.4% for deregulated activities in the Euro zone (6.2% to 7.8% in 2007):
- 6.5% to 9.7% in Europe outside the Euro zone (5.8% to 10.5% in 2007).

The regulated activities are more sensitive to changes in interest rates, in view of their net-of-tax weighted average cost of capital.

Changes in this item in 2008 mainly concern:

• reversals of impairment on property, plant and equipment of the Polish companies Ersa (Rybnik) and Kogeneracja (€ 87 million) following the long-term improvement in the financial position of these companies with the recovery of electricity prices in Poland;

- reversals of impairment on turbines located in Brazil due to their disposal;
- recognition of impairment on Edison's CIP6 power plants;
- recognition of impairment of € (174) million on EnBW's network assets after the reduction in transmission network access fees.

Impairment in 2007 mainly concerned EnBW's goodwill and assets used in its transmission network, following the German regulator's announcement on January 17, 2008 of an 11% reduction in transmission network access fees. Impairment of goodwill amounted to € 67 million, and impairment of assets € 76 million.

# Note

# Other income and expenses

The heading "Other income and expenses" presented below the operating profit before depreciation and amortization comprises items of an unusual nature or amount.

In 2008, other income and expenses show a net gain of € 25 million. The major component is the non-recurring € 34 million impact of the IEG pension reform in France (see note 3.1.3).

Other income and expenses for 2007 generated income of € 1,063 million, mainly comprising:

- the € 111 million gain on sale of the residual 25% investment in Edenor;
- the € 345 million gain on sale of the Mexican activities;
- the impact of increases and reversals of provisions for renewal following the extension of the useful lives of substation buildings, and elimination of the provision for renewal of metering equipment (€ 555 million).

# Financial result

<b>17.1</b> Cost of gross financial indebtedness	282
17.2 Discount expense	282
17.3 Other financial income and expenses	283

# **17.1**

## Cost of gross financial indebtedness

Details of the components of the cost of gross financial indebtedness are as follows:

(in millions of euros)	2008	2007
Interest expenses on financing operations	(1,684)	(1,660)
Ineffective portion of fair value hedges	(6)	3
Ineffective portion of cash flow hedges	-	1
Transfer to income of changes in the fair value of cash flow hedges	16	(2)
Net foreign exchange gain on indebtedness (1)	17	53
COST OF GROSS FINANCIAL INDEBTEDNESS	(1,657)	(1,605)

<sup>(1)</sup> The figures published at December 31, 2007 have been reclassified in order to offset the €113 million foreign exchange gain on the borrowing financing the UK subsidiaries, which is included in gross financial indebtedness, by changes in the fair value and the foreign exchange result related to instruments used for economic hedging of that debt, which are included under "Other financial income and expenses" (see note 17.3).

# 17.2

### **Discount expense**

The discount expense primarily concerns provisions for the back-end nuclear cycle, decommissioning and last cores, and provisions for long-term and post-employment employee benefits.

Details of this expense are as follows:

(in millions of euros)	2008	2007
Provisions for employee benefits	(1,228)	(1,140)
Provisions for back-end of nuclear cycle, decommissioning and last cores	(1,520)	(1,460)
Other provisions	(49)	(32)
DISCOUNT EXPENSE	(2,797)	(2,632)

# 17.3

## Other financial income and expenses

Other financial income and expenses comprise:

(in millions of euros)	2008	2007
Financial income on cash and cash equivalents	188	96
Gains (losses) on available-for-sale financial assets	547	866
Gains (losses) on other financial assets	351	400
Changes in financial instruments carried at fair value with changes in fair value included in income	(155)	20
Other financial expenses	(81)	(55)
Foreign exchange gain/loss on financial items other than debts (1)	(83)	(68)
Return on hedging assets	520	444
OTHER FINANCIAL INCOME AND EXPENSES	1,287	1,703

<sup>(1)</sup> The figures for 2007 have been restated in order to offset the €113 million foreign exchange gain on the borrowing financing the UK subsidiaries, which is included in gross financial indebtedness, by changes in the fair value and the foreign exchange result related to instruments used for economic hedging of that debt, which are included under "Other financial income and expenses" (see note 17.1).

Gains net of expenses on available-for-sale financial assets include gains on disposals, interest income, and dividends. The decrease observed in 2008 reflects the negative effect of the deteriorating situation on the financial markets, principally reflected in lower gains on the securities portfolio, and impairment of € 156 million recognized against shares in Constellation (see note 4.2).

Changes in financial instruments carried at fair value with changes in fair value taken to income primarily relate to losses on fair value measurement of financial instruments affected by the situation on the financial markets. Other factors were gains on foreign exchange transactions and the settlement of an embedded derivative on an electricity sale contract in Hungary.

### Note Income taxes **18.1** Breakdown of tax liability 284 **18.2** Reconciliation of the theoretical and effective tax expense 285 **18.3** Breakdown of deferred tax assets and liabilities by nature 286 **18.4** Losses carried forward and tax credits 286 **18.5** Tax recorded against equity 286

### 18.1 Breakdown of tax liability

### Details are as follows:

(in millions of euros)	2008	2007
Current tax expense	(1,534)	(2,071)
Deferred taxes	(27)	230
TOTAL	(1,561)	(1,841)

In 2008, € (725) million of the current tax expense relates to EDF's tax consolidated group, and €(809) million to other subsidiaries (€(1,402) million and €(669) million respectively in 2007). This includes the effects of the tax rate reductions enacted in 2007 and applicable from 2008 in the UK, Germany and Italy. In Italy, the impact of the lower rate was partly counterbalanced by the 5.5% tax rate increase on energy sector companies' profits introduced by a decree-law of June 25, 2008 (€75 million).

Deferred taxes for 2008 include the effect of the phasing out of Industrial Buildings Allowances in the UK under the country's 2008 finance law (€(34) million), and the impacts of additional taxes on energy sector companies in Italy referred to above.

In 2007, deferred taxes included income of €493 million corresponding to the decrease in the deferred tax liabilities of EnBW, EDF Energy and Edison following the lower income tax rates adopted in Germany, the UK and Italy for application from 2008. The German tax reform had the most significant impact (€ 304 million).

# 18.2

### Reconciliation of the theoretical and effective tax expense

### 18.2.1 Reconciliation of the theoretical and effective tax rate

(in millions of euros)	2008	2007
Income of consolidated companies before tax	4,744	7,457
Goodwill impairment	-	68
Income of consolidated companies before tax and goodwill impairment	4,744	7,525
Theoretical tax expense	(1,633)	(2,591)
Differences in tax rate	46	538
Permanent differences	(69)	157
Taxes without basis	62	(10)
Net depreciation of deferred tax assets	2	47
Other	31	18
Actual tax expense	(1,561)	(1,841)
EFFECTIVE TAX RATE	32.91%	24.47%

The main factors explaining the difference between the French tax rate (34.43%) and the effective rate are:

- 2008:
  - the adjustment of deferred taxes following changes in tax rules during the year in the UK and Italy (€(118) million),
  - the positive impact of the French research tax credit reform (€38 million),
  - the positive impact of differences in the tax rate applicable to foreign subsidiaries (€ 164 million);

### • 2007:

- the adjustment of deferred taxes following the reduction of the income tax rate in Germany from 38% to 29% (€304 million),
- the adjustment of deferred taxes following other reductions in income tax rates in the UK (€ 114 million) and Italy (€ 75 million),
- the positive impact of differences in tax rates of the foreign subsidiaries (€45 million),
- the tax savings related to the tax-exemption of gains on the sale of consolidated companies that took place in 2007; this had a positive tax effect
- € 38 million for the sale of Edenor,
- € 150 million for the sale of the Mexican activities.

### 18.2.2 Change in deferred taxes

(in millions of euros)	Deferred tax assets	Provision on deferred tax assets	Net deferred tax assets	Deferred tax liabilities	Net deferred taxes
Situation at December 31, 2006	3,417	(1,250)	2,167	(4,646)	(2,479)
Change in tax basis	(553)	17	(536)	97	(439)
Change in scope of consolidation	42	(13)	29	(76)	(47)
Translation adjustments	(48)	(3)	(51)	190	139
Situation at December 31, 2007	2,858	(1,249)	1,609	(4,435)	(2,826)
Change in tax basis	1,411	42	1,453	(259)	1,194
Change in scope of consolidation	105	(1)	104	(6)	98
Translation adjustments	(256)	2	(254)	614	360
SITUATION AT DECEMBER 31, 2008	4,118	(1,206)	2,912	(4,086)	(1,174)

In 2008, the €1,194 million change in the tax bases has an impact of €(27) million on income and €1,435 million on equity.

In 2007, the €(439) million change in the tax bases had an impact of €230 million on income and €(691) million on equity.

# 18.3

### Breakdown of deferred tax assets and liabilities by nature

(in millions of euros)	12.31.2008	12.31.2007
Deferred tax assets:		
Differences between depreciation recorded for accounting and tax purposes	989	880
Non-deductible provisions for pensions obligations	3,863	4,166
Other non-deductible provisions	908	968
Other deductible temporary differences	2,331	1,611
Revaluations, revaluation surplus and elimination of intercompany profit	485	177
Tax losses and unused tax credits	47	102
Netting of deferred tax assets and liabilities	(4,505)	(5,046)
Deferred tax assets - gross value	4,118	2,858
Provision on deferred tax assets	(1,206)	(1,249)
Deferred tax assets - net value	2,912	1,609
Deferred tax liabilities:		
Differences between depreciation recorded for accounting and tax purposes	(5,256)	(5,524)
Other deductible temporary differences	(2,374)	(2,778)
Revaluations, revaluation surplus and elimination of intercompany profit	(959)	(1,177)
Netting of deferred tax assets and liabilities	4,503	5,044
Deferred tax liabilities	(4,086)	(4,435)
NET DEFERRED TAXES	(1,174)	(2,826)

# 18.4

### Losses carried forward and tax credits

At December 31, 2008, tax loss carryforwards and unrecorded deferred tax assets represent a potential tax saving of €1,249 million (€1,249 million at December 31, 2007). Most of this tax saving lies in deferred tax assets related to employee benefits in France.

# 18.5

### Tax recorded against equity

The total deferred tax recorded against components of equity during 2008 amounts to € 1,435 million (€ (691) million in 2007), corresponding to:

- € 1,517 million in changes in the fair value of available-for-sale financial assets and hedging instruments (see notes 25.3.2 and 36.4);
- €(82) million from transfers of these items to income (see notes 25.3.2 and 36.4).

## Goodwill

Goodwill on consolidated entities comprises the following:

(in millions of euros)	12.31.2008	12.31.2007
Net book value at opening date	7,266	7,123
Acquisitions	138	441
Disposals	(8)	(2)
Impairment	(4)	(68)
Translation adjustments	(580)	(238)
Other movements	(5)	10
NET BOOK VALUE AT CLOSING DATE	6,807	7,266
Gross value at closing date	7,641	8,096
Accumulated impairment at closing date	(834)	(830)

The breakdown of goodwill is as follows:

(in millions of euros)	United Kingdom	Germany	Italy	Rest of Europe	Rest of the World	Total
AT DECEMBER 31, 2008	1,786	1,405	2,020	1,501	95	6,807
At December 31, 2007	2,320	1,390	2,031	1,435	90	7,266

In 2008, the decrease in goodwill mainly concerns EDF Energy, following the pound sterling's fall against the euro.

In 2007, the increase in goodwill included:

- the effects of EnBW's external growth in Germany;
- the effect of Edison warrants exercised in Italy;

- in the "Rest of Europe" segment, external growth operations by Dalkia International, EDF Énergies Nouvelles, and the acquisitions of Fahrenheit and the additional 13.77% in Électricité de Strasbourg;
- in the "Rest of the World" segment, the investment in Unistar Nuclear Energy.

Goodwill impairment of €67 million was booked in 2007 in respect of EnBW's Transmission activities (see note 5.2.2).

## Other intangible assets

**20.1** At December 31, 2008

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**20.2** At December 31, 2007

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The net value of other intangible assets breaks down as follows:

# **20.1** At December 31, 2008

(in millions of euros)	12.31.2007	Acquisitions	Disposals	Amortization	Translation adjustments	Other movements	12.31.2008
Greenhouse gas emission rights - Green Certificates	228	667	(342)	-	(69)	68	552
Other intangible assets	3,581	579	(62)	-	(68)	135	4,165
Gross values	3,809	1,246	(404)	-	(137)	203	4,717
Accumulated amortization	(1,388)	-	60	(391)	47	31	(1,641)
NET VALUES	2,421	1,246	(344)	(391)	(90)	234	3,076

# 20.2 At December 31, 2007

(in millions of euros)	12.31.2006	Acquisitions	Disposals	Amortization	Translation adjustments	Other movements	12.31.2007
Greenhouse gas emission rights	241	237	(238)	-	(19)	7	228
Other intangible assets	2,997	488	(45)	-	(29)	170	3,581
Gross values	3,238	725	(283)	-	(48)	177	3,809
Accumulated amortization	(1,138)	-	41	(315)	15	9	(1,388)
NET VALUES	2,100	725	(242)	(315)	(33)	186	2,421

Greenhouse gas emission quotas are covered by a provision for risk (see note 32.6.3).

EDF's research and development expenses recorded in the income statement total €375 million for the year ended December 31, 2008.

## Property, plant and equipment operated under French public electricity distribution concessions

**21.1** Net value of property, plant and equipment operated under French public electricity distribution concessions

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**21.2** Movements in property, plant and equipment operated under French public electricity distribution concessions (excluding assets in progress)

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# 21.1

# Net value of property, plant and equipment operated under French public electricity distribution concessions

(in millions of euros)	12.31.2008	12.31.2007
Property, plant and equipment	40,253	38,691
Property, plant and equipment in progress	960	1,291
PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS	41,213	39,982

# 21.2

# Movements in property, plant and equipment operated under French public electricity distribution concessions (excluding assets in progress)

(in william of sures)	Land & Buildings	Fossil-fired & hydropower plants	Networks	Other installations, plant, machinery &	Total
(in millions of euros)  Gross values at 12.31.2006	2.005	25	FO 446	equipment & other	64.266
	2,005		59,446	2,790	64,266
Increases (1)	17	-	1,956	87	2,060
Decreases	(23)	-	(263)	(169)	(455)
Translation adjustment	-	=	-	-	-
Changes in the scope of consolidation	-	- (4.4)	-	-	
Other movements	61	(14)	6	62	115
Gross values at 12.31.2007	2,060	11	61,145	2,770	65,986
Increases (1)	46	-	3,245	202	3,493
Decreases	(35)	-	(321)	(194)	(550)
Translation adjustment	-	-	-	-	-
Changes in the scope of consolidation	-	-	-	-	-
Other movements	47	(1)	13	27	86
Gross values at 12.31.2008	2,118	10	64,082	2,805	69,015
Depreciation and impairment at 12.31.2006	(1,076)	(8)	(22,708)	(1,984)	(25,776)
Net depreciation	(32)	-	(146)	(102)	(280)
Disposals	20	-	188	164	372
Translation adjustment	-	-	-	-	-
Changes in the scope of consolidation	-	-	-	-	-
Other movements (2)	(49)	6	(1,483)	(85)	(1,611)
Depreciation and impairment at 12.31.2007	(1,137)	(2)	(24,149)	(2,007)	(27,295)
Net depreciation	(33)	-	(151)	(100)	(284)
Disposals	35	-	257	193	485
Translation adjustment	-	-	-	-	-
Changes in the scope of consolidation	-	-	-	-	-
Other movements (2)	(40)	(1)	(1,559)	(68)	(1,668)
Depreciation and impairment at 12.31.2008	(1,175)	(3)	(25,602)	(1,982)	(28,762)
Net values at 12.31.2006	929	17	36,738	806	38,490
Net values at 12.31.2007	923	9	36,996	763	38,691
NET VALUES AT 12.31.2008	943	7	38,480	823	40,253

<sup>(1)</sup> Increases also include assets contributed for nil consideration.

<sup>(2)</sup> Other movements mainly concern depreciation of assets operated under concession, booked against amortization recorded in the special concession liabilities.

# Property, plant and equipment operated under concessions for other activities

**22.1** Net value of property, plant and equipment operated under concessions for other activities

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**22.2** Movements in property, plant and equipment operated under concessions for other activities (excluding construction in progress and finance-leased assets)

290

# 22.1

# Net value of property, plant and equipment operated under concessions for other activities

The net value of property, plant and equipment operated under concessions for other activities breaks down as follows:

1 1 2/1		
(in millions of euros)	12.31.2008	12.31.2007
Property, plant and equipment	25,996	26,390
Property, plant and equipment in progress	961	761
PROPERTY, PLANT AND EQUIPMENT OPERATED	26,957	27,151
UNDER CONCESSIONS FOR OTHER ACTIVITIES		

# 22.2

# Movements in property, plant and equipment operated under concessions for other activities (excluding construction in progress and finance-leased assets)

(in millions of euros)	Land & Buildings	Fossil-fired & hydropower plants	Networks	Other installations, plant, machinery & equipment & other	Total
Gross values at 12.31.2006	3,760	8,894	29,915	2,005	44,574
Increases	62	103	929	81	1,175
Decreases	(13)	(16)	(100)	(79)	(208)
Translation adjustment	(54)	(31)	(828)	(39)	(952)
Changes in the scope of consolidation	(5)	(84)	64	-	(25)
Other movements	-	50	39	4	93
Gross values at 12.31.2007	3,750	8,916	30,019	1,972	44,657
Increases	92	132	1,747	349	2,320
Decreases	(19)	(30)	(146)	(87)	(282)
Translation adjustment	(116)	20	(2,324)	(28)	(2,448)
Changes in the scope of consolidation	-	-	5	(1)	4
Other movements (1)	45	(12)	629	(7)	655
Gross values at 12.31.2008	3,752	9,026	29,930	2,198	44,906
Depreciation and impairment at 12.31.2006	(1,798)	(4,304)	(10,019)	(1,373)	(17,494)
Net depreciation	(80)	(206)	(783)	(101)	(1,170)
Disposals	10	11	73	74	168
Translation adjustment	17	5	168	18	208
Changes in the scope of consolidation	1	9	-	-	10
Other movements	2	6	4	(1)	11
Depreciation and impairment at 12.31.2007	(1,848)	(4,479)	(10,557)	(1,383)	(18,267)
Net depreciation	(82)	(230)	(891)	(88)	(1,291)
Disposals	12	18	115	80	225
Translation adjustment	32	(7)	473	(10)	488
Changes in the scope of consolidation	-	-	1	1	2
Other movements (1)	(2)	(1)	(71)	7	(67)
Depreciation and impairment at 12.31.2008	(1,888)	(4,699)	(10,930)	(1,393)	(18,910)
Net values at 12.31.2006	1,962	4,590	19,896	632	27,080
Net values at 12.31.2007	1,902	4,437	19,462	589	26,390
NET VALUES AT 12.31.2008	1,864	4,327	19,000	805	25,996

(1) Including reclassifications amounting to € 555 million in the United Kingdom (see note 23.2).

The translation adjustment for the UK reflects the fall in the value of the pound sterling between December 31, 2007 and December 31, 2008.

Property, plant and equipment operated under concessions other than French public electricity distribution concessions comprises concession facilities mainly located in France (transmission and hydropower), the UK, Germany and Italy.

# Note

## Property, plant and equipment used in generation and other tangible assets owned by the Group

23.1 Net value of property, plant and equipment used in generation and other tangible assets owned by the Group 291 23.2 Movements in property, plant and equipment used in generation and other tangible assets owned by the Group (excluding construction in progress and finance-leased assets) 292 **23.3** Finance lease obligations 293

# 23.1

# Net value of property, plant and equipment used in generation and other tangible assets owned by the Group

The net value of property, plant and equipment used in generation and other tangible assets owned by the Group breaks down as follows:

(in millions of euros)	12.31.2008	12.31.2007
Property, plant and equipment owned by the Group	33,547	33,855
Property, plant and equipment in progress	5,389	3,655
Leased property, plant and equipment	309	298
PROPERTY, PLANT AND EQUIPMENT USED IN GENERATION AND OTHER TANGIBLE ASSETS OWNED BY THE GROUP	39,245	37,808

# Movements in property, plant and equipment used in generation and other tangible assets owned by the Group (excluding construction in progress and finance-leased assets)

(in millions of euros)	Land & Buildings	Nuclear power plants	Fossil-fired & hydropower plants	Networks	Other installations, plant, machinery & equipment	Total
Gross values at 12.31.2006	11,855	45,474	14,446	1,577	6,908	80,260
Increases	306	866	718	773	886	3,549
Decreases	(336)	(221)	(49)	(64)	(140)	(810)
Translation adjustment	9	-	(162)	(33)	(37)	(223)
Changes in the scope of consolidation	131	-	(671)	170	20	(350)
Other movements	(47)	17	(266)	(45)	(432)	(773)
Gross values at 12.31.2007	11,918	46,136	14,016	2,378	7,205	81,653
Increases	407	709	857	64	1,543	3,580
Decreases	(122)	(276)	(56)	(1)	(148)	(603)
Translation adjustment	(159)	-	(665)	(30)	(370)	(1,224)
Changes in the scope of consolidation	25	-	3	2	99	129
Other movements (1)	(35)	89	19	(671)	(19)	(617)
Gross values at 12.31.2008	12,034	46,658	14,174	1,742	8,310	82,918
Depreciation and impairment at 12.31.2006	(5,756)	(28,826)	(7,451)	(767)	(3,469)	(46,269)
Net depreciation	(308)	(1,160)	(609)	(146)	(418)	(2,641)
Disposals	258	182	40	58	120	658
Translation adjustment	(15)		21	(2)	31	35
Changes in the scope of consolidation	(29)	-	226	(71)	(4)	122
Other movements	66	1	187	(10)	53	297
Depreciation and impairment at 12.31.2007	(5,784)	(29,803)	(7,586)	(938)	(3,687)	(47,798)
Net depreciation	(314)	(1,214)	(515)	(125)	(454)	(2,622)
Disposals	75	246	40	6	156	523
Translation adjustment	37	-	273	(9)	161	462
Changes in the scope of consolidation	(4)	-	(5)	(1)	(18)	(28)
Other movements (1)	9	(6)	7	99	(17)	92
Depreciation and impairment at 12.31.2008	(5,981)	(30,777)	(7,786)	(968)	(3,859)	(49,371)
Net values at 12.31.2006	6,099	16,648	6,995	810	3,439	33,991
Net values at 12.31.2007	6,134	16,333	6,430	1,440	3,518	33,855
NET VALUES AT 12.31.2008	6,053	15,881	6,388	774	4,451	33,547

 $<sup>(1) \ \</sup>textit{Including reclassification as property, plant and equipment operated under concessions for other activities (£555 million) in the UK (see note 22.2).}$ 

Following impairment tests, the Group has recorded net impairment of €115 million at December 31, 2008 (€79 million at December 31, 2007), on certain items of property, plant and equipment owned by the Group. Most of this impairment concerns EnBW's transmission networks (€(174) million, essentially for gas activities), and reversals of impairment in Poland (€54 million for Ersa and €33 million for Kogeneracja).

## Finance lease obligations

The Group is a party to agreements classified as finance leases under IFRIC 4, which account for almost all of its finance lease commitments as lessor. These agreements mainly concern EDF Energy.

The Group is also bound by irrevocable finance-lease contracts for premises, equipment and vehicles used in the course of its business. The corresponding payments are subject to renegotiation at intervals defined in the contracts. The main companies concerned are Tiru and Sofilo.

At December 31, 2008, the total expenses and commitments for irrevocable finance-lease payments were as follows:

		12.31.2007			
			_		
(in millions of euros)	Total	< 1 year	1 - 5 years	> 5 years	Total
Financial lease commitments as lessor	439	45	204	190	589
Financial lease commitments as lessee	229	14	144	71	246

# Note

# Investments in companies accounted for under the equity method

Investments in associates are as follows:

		12.31	12.31.2007			
(in millions of euros)	Principal activity (1)	% voting rights held	Share of net equity	Share of net income	Share of net equity	Share of net income
Atel Group (2)	G	24.8	803	115	671	102
Dalkia Holding	S	34.0	521	90	466	24
EVN	D	16.4	478	37	441	38
Estag	G	20.0	383	32	365	34
Other investments in associates			634	78	587	(30)
INVESTMENTS IN COMPANIES ACCOUNTS FOR UNDER THE EQUITY METHOD	:D		2,819	352	2,530	168

(1) S = services, G = generation, D = distribution.

(2) The Atel Group comprises Atel Holding and Atel.

The principal changes in 2008 result from:

- the transfer of Metronet's assets and liabilities to Transport for London (TFL) on May 27, 2008, leading to reversal of an amount of £25 million
- (€33 million) from the provisions booked in 2007 to cover the risks associated with the company's insolvency administration;
- the €63 million gain recorded by Dalkia Holding on the sale of Clemessy.

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At December 31, 2007, the main published indicators concerning companies accounted for under the equity method were as follows:

(in millions of euros)	Total Assets	Total Liabilities (excluding Equity)	Sales	Net income
Atel	5,671	3,483	8,187	474
Dalkia holding <sup>(1)</sup>	7,823	5,581	6,946	201
EVN (2)	6,636	3,428	2,397	230
Estag	2,238	974	1,174	162

<sup>(1)</sup> Consolidated financial data including Dalkia Investissement and Dalkia International.

# Note

## **Current and non-current financial assets**

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# 25.1

### Breakdown between current and non-current financial assets

Current and non-current financial assets break down as follows:

		12.31.2008			12.31.2007		
(in millions of euros)	Current	Non-current	Total	Current	Non-current	Total	
Financial assets carried at fair value with changes in fair value included in income	4,831	2	4,833	5,967	2	5,969	
Available-for-sale financial assets*	7,925	15,187	23,112	6,223	13,799	20,022	
Held-to-maturity investments*	78	449	527	68	459	527	
Positive fair value of hedging derivatives	2,079	1,626	3,705	1,667	632	2,299	
Loans and financial receivables*	416	839	1,255	951	913	1,864	
FINANCIAL ASSETS	15,329	18,103	33,432	14,876	15,805	30,681	

<sup>\*</sup> Net of impairment €530 million (€374 million in 2007).

Financial assets carried at fair value mainly concern EDF Trading.

The decrease primarily reflects the change in commodity volumes and prices on the company's position. A similar effect is reflected in the liabilities (see note 34.1).

Available-for-sale financial assets comprise € 19,059 million of acquisitions, €12,112 million of disposals and €3,265 million of changes in fair value resulting from the sharp decline on the financial markets.

<sup>(2)</sup> Data as of September 30, 2008.

# Change in current and non-current financial assets other than derivatives

The variation in financial assets is as follows:

#### 25.2.1 At December 31, 2008

(in millions of euros)	12.31.2007	Increases	Decreases	Changes in fair value	Other	12.31.2008
Available-for-sale financial assets	20,022	18,858	(12,074)	(3,265)	(429)	23,112
Held-to-maturity investments	527	74	(69)	-	(5)	527
Loans and financial receivables	1,864	1,448	(1,267)	-	(790)	1,255

### 25.2.2 At December 31, 2007

(in millions of euros)	12.31.2006	Increases	Decreases	Changes in fair value	Other	12.31.2007
Available-for-sale financial assets	21,467	11,496	(12,899)	286	(328)	20,022
Held-to-maturity investments	442	154	(36)	-	(33)	527
Loans and financial receivables	1,894	358	(281)	-	(107)	1,864

# 25.3

## **Details of financial assets**

### 25.3.1 Financial assets carried at fair value with changes in fair value included in income

(in millions of euros)	12.31.2008	12.31.2007
Derivatives - positive fair value	4,753	5,880
Fair value of derivatives held for trading (1)	80	89
FINANCIAL ASSETS CARRIED AT FAIR VALUE WITH CHANGES IN FAIR VALUE INCLUDED IN INCOME	4,833	5,969
(1) Portion classified as liquid assets	74	80

The fair value of derivatives is mostly determined on the basis of listed prices and market information (see note 2.16.1.6.2).

#### 25.3.2 Available-for-sale financial assets

	12.31.2008				12.31.2007		
(in millions of euros)	Equities*	Debt securities	Total	Equities*	Debt securities	Total	
Dedicated assets of EDF	4,163	4,495	8,658	5,050	3,554	8,604	
Liquid assets	4,957	1,694	6,651	1,349	4,253	5,602	
Strategic shares	634	-	634	-	-	-	
Other	5,166	2,003	7,169	4,447	1,369	5,816	
AVAILABLE-FOR-SALE FINANCIAL ASSETS	14,920	8,192	23,112	10,846	9,176	20,022	

<sup>\*</sup> Equities and investment funds.

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The "Strategic investment" item corresponds to the shares of Constellation Energy Group (see note 4.2).

At December 31, 2008, 82.00% of the portfolio is valued by reference to prices quoted or listed on an active market (96.43% at December 31, 2007).

The unrealized losses of the year reflect the impact of the financial market crisis on portfolios invested in Group shares.

Changes in the fair value of available-for-sale financial assets were recorded in equity over the period as follows:

#### - IN 2008

(in millions of euros)	Gross changes in fair value recorded in equity <sup>(1)</sup>	Taxes related to gross changes in fair value recorded in equity	Changes after taxes in fair value recorded in equity (1)	Gross changes in fair value transferred to income <sup>(2)</sup>	Taxes related to changes in fair value transferred to income	Changes after taxes in fair value transferred to income <sup>(2)</sup>
Available for sale financial assets - equities	(3,235)	919	(2,316)	50	(21)	29
Available for sale financial assets - debts	100	(47)	53	35	(9)	26
Liquid assets	(24)	8	(16)	(23)	8	(15)
Other	(10)	5	(5)	21	(7)	14
AVAILABLE-FOR-SALE FINANCIAL ASSETS	(3,169)	885	(2,284)	83	(29)	54

Gross changes in fair value included in equity in 2008 principally concern:

- EDF: €(3,010) million, including €(1,786) million for dedicated assets, with the balance of €(1,224) million chiefly relating to two investment securities. No significant unrealized losses were identified on these two securities at December 31, 2008;
- EnBW: €(245) million.

No impairment was included in income for EDF at December 31, 2008.

The impact on equity includes the current or deferred tax saving related to the changes in value stated above.

#### - IN 2007

(in millions of euros)	Gross changes in fair value recorded in equity (1)	Taxes related to gross changes in fair value recorded in equity	Changes after taxes in fair value recorded in equity (1)	Gross changes in fair value transferred to income <sup>(2)</sup>	Taxes related to changes in fair value transferred to income	Changes after taxes in fair value transferred to income <sup>(2)</sup>
Available for sale financial assets - equities	684	(111)	573	258	(55)	203
Available for sale financial assets - debts	(52)	20	(32)	(4)	1	(3)
Liquid assets	(73)	25	(48)	-	-	-
AVAILABLE-FOR-SALE FINANCIAL ASSETS	559	(66)	493	254	(54)	200

<sup>(1) + / ():</sup> increase/decrease in equity.

#### 25.3.2.1 EDF's DEDICATED ASSET PORTFOLIO

EDF's dedicated asset portfolio consists of financial assets dedicated to covering long-term expenses related to nuclear plant decommissioning and the back-end nuclear cycle (see note 32.4.3). These assets are clearly identifiable and managed separately from the company's other financial assets and investments.

A long-term management strategy is applied for these dedicated assets, which comprise diversified bond, monetary and equity instruments in accordance with the strategic allocation defined by EDF's Board of Directors and reviewed at regular intervals.

The management and governance of these funds comply with the law of June 28, 2006 on secure financing of nuclear expenses.

<sup>(2) + / ():</sup> increase/decrease in net income.

Certain dedicated assets take the form of equity securities and bonds currently held and managed directly by EDF and recorded as such in its balance sheet. The rest comprise specialized collective investment funds on leading international markets, managed by independent French or foreign asset management companies selected on the basis of solicited proposals or through a call for bids. They cover various segments of the bond or equity markets, with EDF aiming to achieve the broadest diversification possible, in the form of open-end funds and "reserved" funds established by the Group solely for its own use.

The reserved funds are assigned performance objectives linked to a benchmark stock market index, within strict risk limits expressed in the form of tracking error. As EDF does not intervene in the operational management of funds within the objectives set out in the investment agreements, line-by-line consolidation of reserved funds would not reflect the intended business objective. These funds fully constitute financial assets, for which the net asset value represents market value. They are therefore carried in the balance sheet at net asset value as a component of availablefor-sale financial assets.

The table below presents changes in the fair value of the dedicated asset portfolio, with particular details of changes in the net asset value of reserved funds:

	Fair value	Fair value
(in millions of euros)	12.31.2008	12.31.2007
North American equities	222	404
European equities	235	416
Japanese equities	19	30
Worldwide bonds	670	644
Total Reserved investment funds	1,146	1,494
Securities	157	470
Equities-based unit trusts	2,145	2,856
Equities	2,302	3,326
Securities	4,495	3,554
Short-term unit trusts	597	225
Bonds	5,092	3,779
Other funds	118	5
Total Other financial investments	7,512	7,110
DEDICATED INVESTMENT FUNDS	8,658	8,604

The cash allocation to dedicated assets for 2008 was made over the first three quarters of the year and amounts to €1,785 million. In view of market conditions, these allocations have been suspended since September 2008. The pace of portfolio allocations over the first three quarters is in line with the Board of Directors' decision of September 2005 to establish dedicated assets at an accelerated pace until 2010 (allocations totaled €2,397 for 2007). The allocations will be resumed as soon as market conditions have stabilized, and adjustment will be made at that time for compliance with the regulatory requirement that liabilities should be covered by the portfolio by June 2011. Withdrawals totaling €266 million were made to cover EDF's cash needs to the extent of reversals of provisions for disbursements in connection with the related obligations.

#### 25.3.2.2 LIQUID ASSETS

Liquid assets are financial assets consisting of funds or interest rate instruments with initial maturity of over three months, that are readily convertible into cash regardless of their maturity, and are managed according to a liquidity-oriented policy.

EDF's monetary investment funds included in liquid assets amount to €4,957 million (€1,349 million at December 31, 2007).

#### 25.3.2.3 OTHER SECURITIES

At December 31, 2008, other securities mainly include:

- at EnBW, € 1,443 million in available-for-sale assets (debt instruments, including € 1,008 million of reserved funds) and € 861 million in availablefor-sale assets (equities, including €364 million of reserved funds);
- at EDF, shares in AREVA (€300 million);
- shares in British Energy: €2,679 million in available-for-sale assets (equities).

## **25.4**

## Fair value of financial assets recorded at amortized cost

	12		12	2.31.2007
(in millions of euros)	Fair value	Net book value	Fair value	Net book value
Held-to-maturity investments	527	527	527	527
Loans and financial receivables	1,255	1,255	1,864	1,864
FINANCIAL INSTRUMENTS OTHER THAN DERIVATIVES	1,782	1,782	2,391	2,391

#### **Investment commitments**

At December 31, 2008, commitments related to investments are as follows:

		12.31.2008				
		Maturity				
(in millions of euros)	Total	< 1 year	1 - 5 years	> 5 years	Total	
Investment commitments	18,783	16,195	2,472	116	2,752	
Other financing commitments given	338	218	104	16	217	
Other financing commitments received	255	239	16	-	70	

#### 25.5.1 Investment commitments

- Share purchase commitment resulting from the purchase offer by Lake Acquisitions Ltd. to acquire British Energy. Based on the shares presented in acceptance of the offer on January 5, 2009, the acquisition cost amounts to £9,875 million (see note 4.1).
- Commitment by EDF to purchase 49.99% of the nuclear power assets belonging to the US company Constellation Energy through a joint venture for \$4.5 billion, partly financed by a \$1 billion liquidity contribution made on December 17, 2008. Constellation also has a put option to sell up to \$2 billion of certain non-nuclear assets (see note 4.2). The total value of the commitments related to this operation is €4,074 million, which includes other commitments totaling € 122 million (\$169 million). Should EDF withdraw from the agreements although all the necessary authorizations have been issued, these commitments would become null and void and EDF would be obliged to pay Constellation a contractual indemnity of € 126 million (\$175 million).
- Commitment granted to OEW by EDF International relating to EnBW under a shareholder agreement concluded on July 26, 2000: OEW, which jointly controls EnBW with EDF, has a put option on all or some of its Subjected Shares (25% of the capital of EnBW), exercisable at any time until December 31, 2011 at the price of €37.14 per share. This option is included in the EDF group's off balance sheet commitments at December 31, 2008 at the value of €2,322 million.
- Commitment by EnBW to purchase 26% of shares in EWE for a total of € 2,034 million. EDF's share amounts to € 937 million. This operation still requires the authorization of the German anti-cartel office.
- On December 19, 2008, the Swiss energy groups Atel and EOS HOLDING announced their intention to merge to form an entity named Alpiq Holding SA, with the aim of becoming Switzerland's leading energy operator.

Under the terms of an agreement signed on December 18 by EDF, EOS HOLDING and CSM, a consortium of shareholders in Atel Holding, EDF will hold a 25% share in this new entity, while EOS HOLDING and CSM will each hold 31%

In accordance with this agreement, EDF decided on January 15, 2009 to contribute to the new company its energy rights from the Emosson dam, valued at CHF 720 million (€485 million), and CHF 337 million (€227 million) in cash, through a capital increase.

- Various options or agreements entered into by EDF International (€225 million) and EnBW (€126 million) in respect of shares in various companies in the energy generation industry.
- Commitments made by Edev SA in relation to EDF Énergies Nouvelles: In connection with EDF EN's admission to the regulated market on November 28, 2006, a shareholder agreement and a further agreement concerning EDF EN were signed on July 17, 2006 between EDF and Edev (hereafter referred to as "the EDF group") and Mr Pâris Mouratoglou and the Luxembourg company SIIF - Société Internationale d'Investissements Financiers (hereafter referred to as "the Mouratoglou Group"). An amendment to this agreement was also signed between the two Groups on November 10, 2006.

The outstanding commitments made under these agreements by the EDF group and the Mouratoglou Group applicable at December 31, 2008 are as follows:

- Liquidity commitment
- The EDF group and the Mouratoglou Group will refrain from any acquisition of shares that would reduce the publicly traded portion of the capital of EDF EN to below 95% of that portion. This commitment by the EDF group would expire should the Mouratoglou Group come to own less than 10% of the capital of EDF EN.
- Preferential right

In the event that the Mouratoglou Group plans to transfer some or all of its shares, the EDF group will benefit from a preferential right to purchase those shares. This right will be exercised differently depending on whether the beneficiary of the intended share transfer is one or more financial institutions (for placement with institutional investors or on the market), or other third parties.

If the EDF group does not exercise its preferential right, the Mouratoglou Group may proceed with the intended transfer.

This preferential right will not apply in certain circumstances defined in the agreement.

- Provisions concerning the Mouratoglou Group's investment Should the Mouratoglou Group's investment fall below 10% of the capital of EDF EN, Edev would grant the Mouratoglou Group a put option for three months from the date at which the investment falls below 10%, covering all the Mouratoglou Group's residual investment in EDF EN, at a per-share price equal to the average volume-weighted closing price of the EDF EN share over the 60 trading days preceding notification of exercise of the option; this price cannot be more than 10% higher than the share's last closing price before such notification.

If the Mouratoglou Group does not exercise this put option, Edev will have a call option over all shares held by the Mouratoglou Group for a three-month period starting upon the expiry of the exercise period for the above put option, at a per-share price identical to the price defined for the put option; this price cannot be more than 10% lower than the share's last closing price before notification.

These two options will automatically expire on December 31, 2015.

• Agreement with Veolia Environnement:

Veolia Environnement has granted EDF a call option on all its Dalkia shares in the event that a competitor of EDF takes control over Veolia Environnement. EDF has also granted Veolia Environnement a call option over all its Dalkia shares in the event that the status of EDF should change and a competitor of Veolia Environnement, individually or with other parties, should take control over EDF. If the parties fail to agree on the sale price of the shares, it is to be fixed by an independent expert.

• In connection with the formation of EDF Investissement Groupe, C3 (a wholly-owned EDF subsidiary) signed unilateral promises with NBI (Natixis Belgique Investissement, a subsidiary of the Natixis group) to buy and sell shares in investments held respectively by NBI and C3. NBI thus allows C3 to purchase NBI's investment at any time based on the company's net asset value until 2030, and to sell its total investment to NBI based on net asset value during the 5 years following formation of the company.

#### 25.5.2 Other investment commitments

These commitments primarily concern investment guarantees provided by Dalkia International (€26 million at December 31, 2008, €54 million at December 31, 2007), EnBW (€77 million at December 31, 2008, €74 million at December 31, 2007) and EDEV (€27 million at December 31, 2008).

Through its subsidiaries EDF Énergies Nouvelles and Sofilo, the EDF group also received various commitments amounting to a total of €255 million at December 31, 2008 (€70 million in 2007).

# Note

## Inventories, including work-in-process

The carrying value of inventories, broken down by nature, is as follows:

(in millions of euros)	Nuclear fuel	Other fuel	Other raw materials	Work-in-process for production of goods and services	Other inventories	Total inventories
Gross value	6,371	1,056	942	286	226	8,881
Provisions	(11)	(4)	(166)	(21)	(1)	(203)
Net value at 12.31.2007	6,360	1,052	776	265	225	8,678
Gross value	6,549	1,347	982	261	367	9,506
Provisions	(14)	(5)	(180)	(4)	(13)	(216)
NET VALUE AT 12.31.2008	6,535	1,342	802	257	354	9,290

The long-term portion (more than one year) mainly concerns nuclear fuel inventories amounting to €4,452 million (€4,344 million at December 31, 2007). The value of EDF Trading's inventories stated at market value is €458 million (€458 million at December 31, 2007).

## Note Trade receivables

Details of net trade receivables are as follows:

(in millions of euros)	12.31.2008	12.31.2007
Trade receivables - gross value excluding EDF Trading	17,433	15,379
Trade receivables EDF Trading - gross value	2,183	1,112
Provisions	(472)	(391)
TRADE RECEIVABLES - NET VALUE	19,144	16,100

Most trade receivables mature within one year.

The credit risk on trade receivables is shown below:

	12.31.2008				
(in millions of euros)	Gross values	Provisions	Net values		
Trade receivables	19,616	(472)	19,144		
- overdue within 6 months	1,735	(162)	1,573		
- overdue by 6-12 months	236	(60)	176		
- overdue by more than 12 months	311	(165)	146		
Trade receivables due	2,282	(387)	1,895		
Trade receivables not yet due	17,334	(85)	17,249		

# Note 28

## Other receivables

Details of other receivables are as follows:

(in millions of euros)	Current accounts receivable	Prepaid expenses	Other receivables	Total
Gross values at 12.31.2007	243	492	4,551	5,286
Provisions at 12.31.2007	(12)	-	(31)	(43)
Net values at 12.31.2007	231	492	4,520	5,243
Gross values at 12.31.2008	164	724	7,688	8,576
Provisions at 12.31.2008	(6)	-	(40)	(46)
NET VALUES AT 12.31.2008	158	724	7,648	8,530

The majority of other receivables are due within one year.

<sup>&</sup>quot;Other receivables" mainly comprise amounts due to the French State and public authorities

They also include €305 million of loans by Domofinance, a credit institution that makes loans to finance works and installations contributing to energy control (€ 159 million at December 31, 2007).

The rise between 2007 and 2008 mainly results from the increase in receivables related to margin calls undertaken as part of optimization of the group's trading activities, and the higher amount of deductible VAT for EDF essentially caused by creation of the subsidiary ERDF.

# Note

## Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and at bank and investments in money market instruments. Cash and cash equivalents as stated in the cash flow statements include the following amounts recorded in the balance sheet:

(in millions of euros)	12.31.2008	12.31.2007
Cash	1,525	1,338
Cash equivalents	4,135	4,498
Financial current accounts	209	199
CASH AND CASH EQUIVALENTS	5,869	6,035

## Held-for-sale assets and liabilities

Held-for-sale assets and liabilities amount to €2 million at December 31, 2008. At December 31, 2007, they mainly concerned Soprolif, thermoelectric plants (Edison Group) and lighting companies (EDF Energy).

Note	<b>Equity</b>		
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		<b>31.4</b> Basic earnings per share and diluted earnings per share	303
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#### 31.1 **Share capital**

There were no changes between 2007 and 2008 in EDF's share capital.

At December 31, 2008, the share capital amounted to €911,085,545, comprising 1,822,171,090 fully subscribed and paid-up shares with nominal value of €0.50 each, owned 84.66% by the French State (84.8% at December 31, 2007), 13.2% by the public (institutional and private investors) and 2% by current and retired Group employees.

#### 31.2 **Treasury shares**

A share repurchase program authorized by the General Shareholders' meeting of June 9, 2006 was implemented by the Board of Directors, within the limits of 10% of the total number of shares making up the Company's capital. The initial duration of the program is 18 months, renewable by tacit agreement for 12 months.

Under the share repurchase program, for which a liquidity contract exists as required by the market regulator AMF, 4,773,403 shares were acquired during 2008 for a total of €274 million, and 4,432,163 shares were sold for a total of €261 million.

At December 31, 2008, treasury shares deducted from consolidated equity represent 3,262,000 shares with total value of €186 million.

#### 31.3 **Dividends**

The general shareholders' meeting of May 20, 2008 decided to distribute a dividend of €1.28 per share in respect of 2007. The balance of €1,274 million was paid out on June 2, 2008, after the interim dividend of €0.58 per share (total €1,057 million) distributed on November 30, 2007 in accordance with the decision of the Board of Directors of November 7, 2007.

At the board of directors' meeting of November 20, 2008, it was decided to pay an interim dividend on December 17, 2008 of €0.64 per share (total distribution: €1,164 million) in respect of 2008.

## Basic earnings per share and diluted earnings per share

The diluted earnings per share is calculated by dividing the Group's share of net income, corrected for dilutive instruments, by the weighted average number of potential shares outstanding over the period after elimination of treasury shares.

At December 31, 2008, there are no longer any dilutive instruments in the EDF group.

The following table shows the reconciliation of the basic and diluted earnings used to calculate earnings per share, and the variation in the weighted average number of shares used in calculating basic and diluted earnings per share:

	2008	2007
Net income attributable to ordinary shares	3,400	5,618
Dilutive effect	-	=
Net income used to calculate diluted earnings per share (in millions of euros)	3,400	5,618
Average weighted number of ordinary shares outstanding at end of period	1,819,558,183	1,822,079,315
EDF's dilutive effect	-	-
Average weighted number of diluted shares outstanding at end of period	1,819,558,183	1,822,079,315
Earnings per share:		
NET EARNINGS PER SHARE (in euros)	1.87	3.08
DILUTED EARNINGS PER SHARE (in euros)	1.87	3.08

#### 31.5 **Capital management**

Article 24 of the law of August 9, 2004 requires the State to hold more than 70% of the capital of EDF at all times.

Equity has increased since the IPO of November 2005, largely due to the realized profits net of dividends paid out, and after inclusion of changes in the fair value of financial instruments taken to equity. It amounts to €24,842 million at December 31, 2008 compared to €28,796 million at December 31, 2007, reflecting the effects of the financial crisis, the fall of the pound sterling and the lower commodity prices of late 2008.

As a result of this decrease in equity and the parallel increase in net indebtedness due to the high investment program and external growth operations, the solvency ratio consisting of the net financial debt to capital employed, calculated by reference to the net indebtedness (see note 34.3) and equity including minority interests, has increased from 36% at December 31, 2007 to 50% at December 31, 2008.

## **Provisions**

**32.1** Breakdown between current and non-current provisions 304 **32.2** Provisions for the back-end nuclear cycle 304 **32.3** Provisions for decommissioning and last cores 307 **32.4** Secure financing of long-term obligations for EDF's nuclear installations 309 32.5 Provisions for employee benefits 310 **32.6** Other provisions and contingent liabilities 314

### 32.1 Breakdown between current and non-current provisions

The breakdown between current and non-current provisions is as follows:

	12.31.2008				12.31.2007			
(in millions of euros)	Current	Non-current	Total	Current	Non-current	Total		
Provisions for back-end nuclear cycle	852	14,686	15,538	756	16,699	17,455		
Provisions for decommissioning and last cores	256	13,886	14,142	557	13,097	13,654		
Provisions for employee benefits	829	12,890	13,719	1,523	12,240	13,763		
Other provisions	2,785	1,953	4,738	1,860	2,002	3,862		
PROVISIONS	4,722	43,415	48,137	4,696	44,038	48,734		

# 32.2

## Provisions for the back-end nuclear cycle

The movement in provisions for back-end nuclear cycle expenses breaks down as follows:

#### - AT DECEMBER 31, 2008

	12.31.2007	Increases	Dec	Decreases Other 12.3		12.31.2007
(in millions of euros)			Utilizations	Reversals	changes	
Provisions for spent fuel management	11,011	961	(2,974)	(18)	(174)	8,806
Provisions for long-term radioactive waste management	6,444	375	(132)	(38)	83	6,732
PROVISIONS FOR BACK-END NUCLEAR CYCLE	17,455	1,336	(3,106)	(56)	(91)	15,538
EDF	16,660	1,230	(3,078)	(10)	(91)	14,711
Subsidiaries and joint ventures	795	106	(28)	(46)	-	827

#### - AT DECEMBER 31, 2007

	12.31.2006	Increases	Decreases		Impact of	Other	12.31.2007
(en millions d'euros)			Utilizations	Reversals (1)	the Law of June 28, 2006	changes	
Provisions for spent nuclear fuel management	10,512	1,032	(625)	(104)	221	(25)	11,011
Provisions for long-term radioactive waste management	4,869	334	(145)	(53)	1,414	25	6,444
PROVISIONS FOR BACK-END NUCLEAR CYCLE	15,381	1,366	(770)	(157)	1,635		17,455
EDF	14,602	1,232	(713)	(96)	1,635	-	16,660
Other	779	134	(57)	(61)	-	-	795

<sup>(1)</sup> For France, this column reflects the effects of changes in estimate.

### 32.2.1 EDF's provisions for the back-end nuclear cycle in France

EDF's provisions at December 31, 2008 are calculated under the principles presented in note 2.2.1, and comply with the instructions of the law of June 28, 2006 and its implementing provisions.

	12.31.2007	Increases	Dec	Decreases		12.31.2008
(in millions of euros)			Utilizations	Reversals	changes	
Provisions for spent fuel management	10,759	917	(2,955)	-	(168)	8,553
Provisions for long-term radioactive waste management	5,901	313	(123)	(10)	77	6,158
PROVISIONS FOR BACK-END NUCLEAR CYCLE	16,660	1,230	(3,078)	(10)	(91)	14,711

The corresponding expenses are estimated based on the economic conditions of the year-end, and spread over a forecast disbursement schedule. A provision is booked equivalent to the discounted value for the year (assuming 2% inflation and a 5% discount rate):

	12.3	1.2008		12.31.2007		
(en millions d'euros)	Costs based on economic conditions at year-end	Amounts in provisions at present value	Costs based on economic conditions at year-end	Amounts in provisions at present value		
For spent fuel management	13,675	8,553	16,209	10,759		
For long-term radioactive waste management	21,464	6,158	20,048	5,901		
BACK-END NUCLEAR CYCLE	35,139	14,711	36,257	16,660		

#### **32.2.1.1 PROVISIONS FOR SPENT FUEL MANAGEMENT**

This covers services in connection with the following:

- removal of spent fuel from EDF's generation centers, reception, interim storage and processing, including conditioning and storage of the resulting
- processing expenses exclusively concerning spent fuel that can be recycled in existing facilities, including the portion in reactors but not yet irradiated.

Measurement of these expenses follows the EDF-AREVA framework agreement governing back-end nuclear cycle contracts for the post-2007 period signed on December 19, 2008. They are calculated based on forecast physical volumes at the reporting date:

- oxidation and storage of uranium obtained from processed fuel that is not immediately recycled. Measurement of these expenses is based on EDF's best estimates, taking into account the ongoing EDF-AREVA negotiations and short-term recycling forecasts for these materials;
- for fuel in reactors but not yet irradiated, provisions are booked against an increase in the value of the fuels included in inventories.

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EDF's contribution towards final shutdown and decommissioning costs for the La Hague reprocessing plant, and its share of the cost of recovering and conditioning old waste resulting from fuel reprocessing on the La Hague site, is fixed in the EDF-AREVA framework agreement of December 19, 2008. Until June 30, 2008 this contribution as measured by EDF was recorded as a component of the provision for spent fuel management. Since the agreed payment to AREVA will release EDF from any further obligations in this respect, the corresponding amount has been reversed from the provision, and an operating liability is recognized at December 31, 2008 at the nominal amount of the payment as set forth in the EDF-AREVA agreement.

#### 32.2.1.2 PROVISIONS FOR LONG-TERM RADIOACTIVE WASTE **MANAGEMENT**

This includes future expenses for:

- removal and storage of radioactive waste resulting from decommissioning of regulated nuclear installations operated by EDF;
- removal and storage of radioactive waste resulting from spent fuel processing at La Hague;
- long-term and direct storage of spent fuel that cannot be recycled on an industrial scale in existing installations: plutonium or uranium fuel derived from enriched processing, fuel from Creys Malville and Brennilis;
- EDF's share of the costs of studies, coverage, shutdown and surveillance of storage centers:
  - existing centers, for very low-level waste, and low and medium-level
  - new centers to be opened, for long-life low-level waste and long-life medium and high-level waste.

The volumes of waste concerned by provisions include packages of existing waste and all waste to be conditioned, resulting from decommissioning or spent fuel processing at La Hague (based on all fuel in reactors at December 31, burnt or otherwise).

These volumes are regularly reviewed, in keeping with the data declared for the purposes of the national waste inventory undertaken by the French agency for radioactive waste management ANDRA (Agence nationale pour la gestion des déchets radioactifs).

For waste resulting from decommissioning of plants in operation, the accounting treatment is identical to the treatment of decommissioning expenses: an asset corresponding to the provision is recognized under the accounting policies described in note 2.11.

For future waste that will result from fuel currently in reactors but not yet irradiated, provisions are booked against an increase in the cost of the fuel included in inventories.

The provision for long-life medium and high-level waste is the largest component of the provisions for long-term radioactive waste management. The French Law of June 28, 2006 on the sustainable management of radioactive materials and waste has confirmed EDF's assumption of geological storage. Provisions are based on that assumption.

Since 2005, the gross value and disbursement schedules for forecast expenses have been based on a scenario of industrial geological waste storage, following conclusions presented in the first half of 2005 by the task force set up by the French department for Energy and Raw Materials (Direction Générale de l'Energie et des Matières Premières – DGEMP) comprising members representing the relevant government departments (DGEMP, the State investment agency APE and the Budget Department), Andra and the producers of waste (EDF, AREVA, CEA). The approach applied by EDF to the working party's conclusions is reasonable and coherent with information available internationally.

Regarding the provision for long-life low-level waste, Andra began to seek a storage site in 2008. New information has been released, including a revised schedule for development and commissioning of Andra's storage site for long-life low-level waste, currently expected for 2019. EDF has taken this information into consideration in estimating its provisions and dedicated assets at December 31, 2008.

### 32.2.2 Provisions for the subsidiaries' back-end nuclear cycle

These provisions, amounting to €827 million at December 31, 2008 (€795 million at December 31, 2007) mainly cover the cost of handling the EnBW Group's spent fuel and radioactive waste. Their amount is based on the obligations prescribed by law and the regulations, or resulting from operating licenses.

As no agreement existed at December 31, 2008, provisions are estimated on the basis of independent expert assessments and cost valuations for obligations that cannot be contractualized. In spent fuel management, this mainly concerns the non-contractualized portion of spent fuel conditioning in preparation for final storage, transportation, acquisition of containers for final storage, and the costs of final storage itself.

A portion of the provisions is based on contracts. In the case of spent fuel management, this concerns the cost of processing costs, decentralized temporary storage near the nuclear plants, transportation and centralized temporary storage on the Gorleben and Ahaus sites, and acquisition costs for containers.

The amounts paid out to the federal radioprotection department for spent fuel processing for 2008 total €208 million (€205 million in 2007). This amount was reversed from provisions. Payments to the federal radioprotection department result from decrees on the prerequisites for creation and implementation of the final storage centers at Gorleben and Konrad.

The discount rate applied is 5.5%.

## **Provisions for decommissioning and last cores**

The change in decommissioning and last core provisions breaks down as follows:

#### - AT DECEMBER 31, 2008

	12.31.2007	Increases	Decreases		Other	12.31.2008
(in millions of euros)			Utilizations	Reversals	changes	
Provisions for decommisioning	11,933	745	(325)	(6)	98	12,445
Provisions for last cores	1,721	85	-	(109)	-	1,697
PROVISIONS FOR DECOMMISSIONING AND LAST CORES	13,654	830	(325)	(115)	98	14,142
of which:						
- EDF (corporate financial statements)	12,095	726	(304)	(111)	63	12,469
- subsidiaries and joint ventures	1,559	104	(21)	(4)	35	1,673

#### - AT DECEMBER 31, 2007

(in millions of euros)	2.31.2006	Increases	Decr Utilizations	Reversals (1)	Impact of the Law of June 28, 2006	Other changes	12.31.2007
Provisions for decommisioning	12,139	686	(168)	(26)	(750)	52	11,933
Provisions for last cores	1,685	88	-	(52)	-	-	1,721
PROVISIONS FOR DECOMMISSIONING AND LAST CORES	13,824	774	(168)	(78)	(750)	52	13,654
of which:							
- EDF (corporate financial statements)	12,315	689	(149)	(52)	(750)	42	12,095
- subsidiaries and joint ventures	1,509	85	(19)	(26)	-	10	1,559

<sup>(1)</sup> For France, this column reflects the effects of changes in estimate.

## 32.3.1 Provisions for decommissioning and last cores (EDF – France)

The change in EDF's decommissioning and last core provisions in France breaks down as follows:

#### - AT DECEMBER 31, 2008

	12.31.2007	Increases	Decreases		Other	12.31.2008
(in millions of euros)			Utilizations	Reversals	changes	
Decommissioning provisions for fossil-fired power plants	420	33	(31)	-	12	434
Decommissioning provisions for nuclear power plants	9,974	608	(273)	-	51	10,360
Provisions for last cores	1,701	85	-	(111)	-	1,675
PROVISIONS FOR DECOMMISSIONING AND LAST CORES	12,095	726	(304)	(111)	63	12,469

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The corresponding expenses are estimated based on the economic conditions of the year-end, and spread over a forecast disbursement schedule. A provision is booked equivalent to the discounted value at the year-end (assuming 2% inflation and a 5% discount rate):

	12.3	1.2008		12.31.2007		
(in millions of euros)	Costs based on economic conditions at year-end	Amounts in provisions at present value	Costs based on economic conditions at year-end	Amounts in provisions at present value		
Decommissioning provisions for fossil-fired power plants	609	434	602	420		
Decommissioning provisions for nuclear power plants	20,452	10,360	19,792	9,974		
Provisions for last cores	3,566	1,675	3,594	1,701		
PROVISIONS FOR DECOMMISSIONING AND LAST CORES	24,627	12,469	23,988	12,095		

#### 32.3.1.1 DECOMMISSIONING PROVISIONS FOR EDF'S FOSSIL-FIRED POWER PLANTS IN FRANCE

The expenses related to decommissioning of fossil-fired power plants are determined according to regularly updated studies based on estimated future costs, measured by reference to the charges recorded on past operations and the most recent estimates for plants still in operation.

For plants still in operation, an asset is recorded against the provision under the principles presented in note 2.11.

Revision of the assumptions concerning certain decommissioning work and the commissioning of new generation facilities in 2008 explain the increase in provisions.

#### 32.3.1.2 DECOMMISSIONING PROVISIONS FOR EDF'S NUCLEAR **POWER PLANTS IN FRANCE**

These provisions concern the decommissioning of pressurized water reactor (PWR) nuclear power plants currently in operation and nuclear power plants that have been permanently shut down.

The 2008 annual update of the three-year report on secure financing of nuclear expenses required by law identified certain peripheral regulated nuclear installations (Installations nucléaires de base) that are operationally integrated into larger groups of facilities. Adequate adjustments to provisions and the associated assets have been recorded in the 2008 financial statements, except in respect of three regulated nuclear installations associated with PWR plants currently in operation. Adjustments for those facilities are due to be assessed in 2009, as part of the general review of provision values in connection with decommissioning of the PWR fleet.

The impact in 2008 of adjustments resulting from the three-year report, including revision of assumptions concerning contractor quotes for decommissioning of plants that have been permanently shut down (see below) led to a €164 million increase in the provision and recognition of a corresponding asset for €52 million.

#### (A) FOR NUCLEAR POWER PLANTS CURRENTLY IN OPERATION (PWR PLANTS WITH 900 MW, 1,300 MW AND N4 REACTORS)

A study undertaken in 1991 by the French Ministry of Trade and Industry estimated a benchmark cost, confirming the assumptions defined in 1979 by the PEON commission, estimating decommissioning costs (including long-term management of waste) at approximately 15% of investment expenditure as a ratio to net continuous power. This estimate was in turn confirmed by further studies focusing on a specific site, carried out in 1999. The underlying assumption is that once decommissioning is complete, the sites will be returned to their original state and the land reused.

The estimated schedule for future disbursements is based on the decommissioning plans drawn up by EDF experts, which take into account all known statutory and environmental regulations applicable, together with an uncertainty factor inherent to the fact that payments will only be made in the long term.

At December 31, 2008, the provision also includes expenses related to the Chinon irradiated materials facility (Atelier des Matériaux Irradiés), for which the estimate was increased in 2008.

An asset corresponding to the provision is recognized under the accounting policies described in note 2.11.

An asset is also recorded in the form of accrued revenues to recognize the share of decommissioning costs for the Cattenom 1-2 and Chooz B 1-2 PWR plants to be borne by foreign partners, in proportion to their investment

#### (B) FOR PERMANENTLY SHUT-DOWN NUCLEAR POWER PLANTS (FIRST-GENERATION UNGG POWER PLANTS AND OTHER PLANTS INCLUDING CREYS-MALVILLE)

The provision is based on the cost of work already completed and on studies, contractor quotes and a comparison made by EDF. Forecast disbursements, based on internally-prepared schedules, are adjusted to reflect inflation, then discounted.

At December 31, 2008, contractor quotes and the schedule for decommissioning of permanently shut-down nuclear plants were revised following the change in the planned opening date for the graphite storage centre (put back from 2013 to 2019), revision of the technical and financial assumptions and inclusion of a peripheral installation.

Finally, the negotiations between EDF and CEA over decommissioning of the Brennilis and Phénix facilities and the future of spent fuel from the two plants resulted in an agreement signed in December 2008:

- EDF will manage and bear the full cost of operations related to Brennilis;
- the CEA will manage and bear the full cost of operations related to Phénix;
- long-term management of waste resulting from final shutdown and dismantling that cannot be removed immediately remains the responsibility of both parties, in proportion to their initial investment.

The CEA will make a payment to EDF in full and final settlement of all amounts due in relation to Brennilis, and EDF will do the same to the CEA in respect of Phénix.

Consequently, the provision covering EDF's obligation for decommissioning of Phenix and the corresponding receivable on the CEA for Brennilis have been cancelled.

#### 32.3.1.3 PROVISION FOR LAST CORES

For EDF, this provision covers expenses related to the future loss on unused fuel following the final reactor shutdown. It comprises two types of expenses:

- write-down of the inventory of fuel in the reactor that will not be totally spent when the reactor is shut down, valued at the average price of components in inventories at November 30, 2008;
- the cost of fuel reprocessing and the corresponding waste disposal and storage costs for fuel not yet spent at the time the plant shuts down. These costs are valued based on parameters at December 31, 2008 for provisions for spent fuel management and long-term radioactive waste management.

Since this provision relates to an obligation that existed at the commissioning date of the nuclear unit containing the core, all costs are fully covered by provision and an asset associated with the provision is recognized.

### 32.3.2 Provisions for decommissioning and last cores (subsidiaries)

The subsidiaries' decommissioning obligations concern the non-nuclear power plants in Europe, and the EnBw Group's nuclear power plants. These provisions amount to €1,686 million at December 31, 2008 (€1,559 million at December 31, 2007).

#### - DECOMMISSIONING OF THE ENBW GROUP'S NUCLEAR PLANTS

EnBW's provisions are based on obligations prescribed by law and regulations, or resulting from the terms of its operating licenses.

As no contract existed at December 31, 2008, provisions are estimated on the basis of independent expert assessments and cost valuations for obligations that cannot be contractualized. This particularly concerns costs expected in connection with decommissioning: post-operating and dismantling expenses.

Provisions for final shutdowns and decommissioning of nuclear plants are established as soon as the plant starts operation, discounting the total amount to present value. An equivalent asset is also recognized in generation assets, and depreciated. This asset amounts to €113 million at December 31, 2008 (€ 106 million in 2007).

Revaluations of the provisions due to changes in assumptions underlying the determination of future costs has no impact on net income, since the changes are recorded as a variation in the asset corresponding to the provision, taking the same value.

The costs of final shutdown and decommissioning of nuclear facilities is based on a scenario assuming immediate execution of the operations with no waiting period.

The discount rate applied is 5.5%.

# **32.4**

# Secure financing of long-term obligations for EDF's nuclear installations

#### 32.4.1 Discount rate

EDF applies a discount rate of 5% in calculating its provisions, together with assumed inflation of 2%, resulting in an effective rate of close to 3%.

#### - CALCULATION OF THE DISCOUNT RATE

The discount rate is determined based on long series data for a sample of bonds with maturities as close as possible to that of the liability. However, some expenses covered by these provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The assumption of the nominal rate is currently appropriate for the duration of nuclear commitments, especially in view of the French 2055 treasury bond. As the average return on 50-year French treasury bonds is not currently available over a sufficient duration, the benchmark is the sliding average over 10 years of the return on French treasury bonds over longer time horizons, plus the spread of corporate bonds rated A to AA, which

The assumed inflation rate used is coherent with the forecasts provided by consensus and expected inflation based on the returns on inflation-linked bonds.

#### - REVISION OF THE DISCOUNT RATE

The methodology used to calculate the discount rate aims to smooth shortterm market effects in order to reflect only long-term trends in rates. It has led to use of a constant discount rate in determining provisions for nuclear commitments since the first application of CRC regulation 2000-06 on liabilities at January 1, 2002. When first calculated, the discount rate was set below contemporary market levels in anticipation of a probable decline in rates. The discount rate is revised on the basis of structural developments in the economy, leading to medium- and long-term changes.

#### - DISCOUNT RATE AND REGULATORY LIMIT

The decree of February 23, 2007 and the decision of March 21, 2007 impose a double limit on the discount rate:

it must be below a regulatory maximum "equal to the arithmetic average over the forty-eight most recent months, of the constant 30-year rate (TEC 30 ans), observed on the last date of the period concerned, plus one point", and it must also be below the expected rate of return on assets covering

The discount rate applied respects both these limits.

### 32.4.2 Sensitivity factors in provisions for the back-end nuclear cycle and provisions for decommissioning and last cores

Since the measurement of all the provisions described in notes 32.2 and 32.3 is sensitive to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules, a revised estimate is established at each closing date to ensure that the amounts accrued correspond to the best estimate of the costs eventually to be borne by the Group.

Any significant differences resulting from these revised estimates could entail changes in the amounts accrued.

This sensitivity to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules can be estimated through comparison of the gross amount estimated under economic conditions for December of the year concerned with the discounted value of the amount.

This approach can be complemented by estimating the impact of a change in the discount rate on the discounted value.

In application of article 11 of the decree of February 23, 2007, the following table reports these details for the main components of provisions for the back-end nuclear cycle, decommissioning of nuclear plants and last cores:

	Amounts in provisions at present value		Sensitivity to discount rate			
			200	2008		7
(in millions of euros)	2008	2007	+ 0.25%	-0.25%	+0.25%	-0.25%
Back-end nuclear cycle:						
- spent nuclear fuel management	8,553	10,759	(189)	201	(212)	225
- long-term radioactive waste management	6,158	5,901	(378)	(378) 430		404
Decommissioning and last cores:						_
- decommissioning for nuclear power plants	10,360	9,974	(539)	574	(516)	550
- depreciation of last cores	1,675	1,701	(79)	85	(85)	91
TOTAL	26,746	28,335	(1,185)	1,290	(1,169)	1,270

#### 32.4.3 Dedicated assets

In order to secure financing of long-term obligations in increasingly open electricity markets, EDF has progressively built up a portfolio of financial assets dedicated to covering long-term nuclear obligations, specifically the decommissioning of currently active nuclear power plants and the longterm management of radioactive waste.

The gross cash allocation to dedicated assets for 2008 amounts to €1,785 million. Withdrawals totaling €266 million were made to cover EDF's cash needs to the extent of reversals of provisions for disbursements in connection with the related obligations.

At December 31, 2008, the fair value of the dedicated asset portfolio amounts to €8,658 million (€8,604 million at December 31, 2007), including €(1,206) million of net unrealized losses related to the financial market crisis, which are recorded in equity (see note 25.3.2.1).

# **32.5**

## **Provisions for employee benefits**

#### 32.5.1 Changes in provisions

The changes in provisions for employee benefits were as follows in the last two years:

#### 32.5.1.1 AT DECEMBER 31, 2008

	12.31.2007	Increases	Decreases		Other	12.31.2008
(in millions of euros)			Utilizations	Reversals	changes	
Provisions for post-employment benefits	12,675	2,117	(1,760)	(317)	(12)	12,703
Provisions for other long-term benefits	1,088	176	(159)	-	(89)	1,016
PROVISIONS FOR EMPLOYEE BENEFITS	13,763	2,293	(1,919)	(317)	(101)	13,719

(in millions of euros)	France	United Kingdom	Germany	Italy	Rest of Europe	Total
Provisions at 12.31.2007	11,370	268	1,892	55	178	13,763
Amounts used during the year	(1,140)	(136)	(101)	(1)	(23)	(1,401)
Changes in the scope of consolidation	-	-	-	-	3	3
Net additions for the year	1,187	108	126	8	29	1,458
Change Rate	-	(49)	-	-	(12)	(61)
Other	3	(50)	1	(3)	6	(43)
PROVISIONS AT 12.31.2008	11,420	141	1,918	59	181	13,719

#### 32.5.1.2 AT DECEMBER 31, 2007

	12.31.2006	Increases	Decreases		Other	12.31.2007
(in millions of euros)			Utilizations	Reversals	changes	
Provisions for post-employment benefits	12,799	1,887	(1,867)	-	(144)	12,675
Provisions for other long-term benefits	1,129	112	(162)	-	9	1,088
PROVISIONS FOR EMPLOYEE BENEFITS	13,928	1,999	(2,029)		(135)	13,763

(in millions of euros)	France	<b>United Kingdom</b>	Germany	Italy	Rest of Europe	Total
Provisions at 12.31.2006	11,444	390	1,856	59	179	13,928
Amounts used during the year	(1,405)	(62)	(94)	1	(24)	(1,584)
Changes in the scope of consolidation	-	-	(3)	(3)	8	2
Net additions for the year	1,331	62	133	7	23	1,556
Other	-	(122)	-	(9)	(8)	(139)
PROVISIONS AT 12.31.2007	11,370	268	1,892	55	178	13,763

The changes in these provisions since December 31, 2007 essentially result from the effects of the special IEG pension reform (see note 3.1) and amendments to certain pension plans at EDF Energy, together with variations in vested benefits, financial discounting of the obligation, payments made to external funds, and benefits paid out.

#### 32.5.2 Provisions for post-employment benefits

#### 32.5.2.1 FRENCH AND FOREIGN SUBSIDIARIES NOT COVERED BY THE SPECIAL IEG SYSTEM

Pension obligations principally relate to British, German and Italian companies and are mostly covered by defined-benefit plans.

Pension obligations are partly covered by external funds. The present value of these fund assets is €4 billion at December 31, 2008 (€ 3.7 billion at December 31, 2007).

Unamortized actuarial variances concern the same subsidiaries.

#### 32.5.2.2 FRENCH SUBSIDIARIES COVERED BY THE IEG SYSTEM

The main measures of the financing reform for the special IEG pension system took effect at January 1, 2005.

Following the financing reform for the special electricity and gas industries' pension system that took place in 2004, provisions recorded for the special pension system correspond to the specific benefits of employees, i.e. benefits not covered by the standard benefit systems.

The provision for pensions thus covers:

- specific benefits of employees in the deregulated or competitive
- specific benefits earned by employees from January 1, 2005 for the regulated activities (transmission and distribution) (past benefits were financed by the CTA levy (Contribution Tarifaire d'Acheminement));
- specific benefits of employees benefiting from early retirement before the standard legal retirement age.

The retirement age and conditions were amended on July 1, 2008 as described in note 3.1.

The valuation also includes CNIEG management expenses payable by EDF for the administration and payment of retired employees' pensions by the CNIEG.

These provisions amount to €8,796 million at December 31, 2008 (€8,790 million at December 31, 2007).

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#### - OTHER POST-EMPLOYMENT BENEFITS

In addition to pensions, other benefits are granted to employees not currently in active service, as detailed below:

(in millions of euros)	12.31.2008	12.31.2007
Benefits in kind (electricity/gas)	1,135	1,130
Retirement gratuities	(3)	2
Bereavement benefit	283	267
Bonus paid leave	202	188
Other post-employment	65	123
PROVISIONS FOR POST-EMPLOYMENT BENEFITS	1,682	1,710
In France	1,665	
Rest of Europe	17	

#### · Benefits in kind (electricity/gas)

Article 28 of the electricity and gas industries' national statutes entitles all employees (active or inactive) to benefits in kind in the form of supplies of electricity or gas at the preferential "Employee price". EDF's obligation for supplies of energy to EDF and GDF Suez employees corresponds to the probable present value of kWHs supplied to beneficiaries during their retirement, valued on the basis of the unit cost, taking into account the payment received under the energy exchange agreement with GDF Suez.

#### Retirement gratuities

Retirement gratuities are paid upon retirement to employees due to receive the statutory old-age pension, or to their dependents if the employee dies before reaching retirement. These obligations are almost totally covered by an insurance policy.

#### · Bereavement benefit

The bereavement benefit is paid out upon the death of an inactive or handicapped employee, in order to provide financial assistance for the expenses incurred at such a time (Article 26 § 5 of the National Statutes). It is paid to the deceased's principal dependants (statutory indemnity equal to two months' pension) or to a third party that has paid funeral costs (discretionary indemnity equal to the costs incurred).

#### • Bonus pre-retirement paid leave

All employees eligible to benefit immediately from the statutory old-age pension and aged at least 55 at their retirement date are entitled to 18 days of bonus paid leave during the last twelve months of their employment.

#### Other benefits

Other benefits include end-of-studies bonuses, additional retirement indemnities and pensions for personnel seconded to Group companies.

### 32.5.3 Provisions for other long-term employee benefits

Personnel are also granted other long-term benefits. At December 31, 2008, the related obligations total €956 million for IEG status employees (€942 million at December 31, 2007). These benefits include:

- annuities following industrial accident, work-related illness or invalidity; like their counterparts in the general national system, IEG employees are entitled to financial support in the event of industrial accident or workrelated illness, and invalidity annuities and benefits. The obligation is measured as the probable present value of future benefits payable to current beneficiaries, including any possible reversions;
- specific benefits for employees who have been in contact with asbestos.

### 32.5.4 Changes in the discounted value of the obligation and fund assets

The main actuarial assumptions used for provisions for post-employment benefits and long-term employee benefits are summarized below:

	France		United I	Kingdom	Germany	
	2008	2007	2008	2007	2008	2007
Discount rates of the obligations	5.75%	5.00%	6.50%	6.00%	6.00%	5.30%
Expected return on fund assets	5.04%	5.05%	5.90%	5.90%	5.00%	5.50%
Pay increase rates	2.00%	2.00%*	4.58%	5.10%	3.50%	2.30%

<sup>\*</sup> Without inflation

In France, the discount rate used for long-term personnel benefit obligations was set at 5.75% at December 31, 2008 compared to 5% at December 31, 2007. This rate is determined based on the return on a government bond of comparable duration – the 2035 French Treasury bond, which has a duration of 16 years consistent with the duration of employee benefit obligations - plus a spread calculated on the leading non-financial companies. Given the economic climate and the exceptionally high spreads late in the year, a conservative medium spread was selected.

The actual return on Group pension fund assets for 2008 is €(784) million (€295 million for 2007), reflecting the effects of the financial market crisis on the profitability of these assets.

The significant variation in unamortized actuarial variances in France (€928 million) is primarily due to the change in the discount rate (5.75% at December 31, 2008 compared to 5% at December 31, 2007) and the differential between the expected return on fund assets and the actual return registered in the year.

For the portfolio of fund assets, in France a 25 base point variation in the expected return on fund assets would result in a 1.32% change in the expected expense for 2009.

The impact of a 25-point variation in the discount rate would be a 3.5% variation in the total value of obligations.

#### 32.5.4.1 CHANGES IN THE DISCOUNTED VALUE OF THE OBLIGATION

(in millions of euros)	France	<b>United Kingdom</b>	Germany	Italy	Rest of Europe	Total
Obligations at 01.01.2008	17,882	3,842	1,970	55	293	24,042
Current year service cost	474	67	26	-	17	584
Interest expenses	914	208	98	2	6	1,228
Actuarial gains and losses	(1,477)	(648)	(160)	-	6	(2,279)
Effect of curtailment or settlement of a plan	-	2	-	-	-	2
Benefits paid	(940)	(161)	(102)	6	(13)	(1,210)
Contributions by plan participants	-	25	-	-	-	25
Past service cost vested	(104)	(40)	-	-	=	(144)
Past service cost not vested	169	-	-	-	2	171
Business combinations	-	(804)	-	-	(7)	(811)
Change rate	1	40	4	(4)	(3)	38
OBLIGATIONS AT 12.31.2008	16,919	2,531	1,836	59	301	21,646
- Fair value of fund assets	(5,926)	(2,260)	(42)	-	(109)	(8,337)
- Unrecognized actuarial gains (losses)	592	(130)	123	-	(12)	573
- Unrecognized past service cost	(168)	-	-	-	-	(168)
NET PROVISIONS RECORDED	11,417	141	1,917	59	180	13,714
Included:						
- Provisions for post-employment benefits	11,420	141	1,918	59	181	13,719
- Pensions assets	(3)	-	(1)	-	(1)	(5)

The main factors contributing the change in obligations result from:

- the effects of the reform of the special IEG pension system (see note 3.1);
- amendment of certain pension plans at EDF Energy;
- a translation adjustment resulting from the 23.01% fall in the pound sterling between December 31, 2007 and December 31, 2008.

Contributions are expected to total €1,247 million in 2009.

The total experience adjustment for EDF corresponds to an actuarial gain of €262 million (€166 million in 2007).

#### 32.5.4.2 CHANGE IN THE DISCOUNTED VALUE OF FUND ASSETS

(in millions of euros)	France	United Kingdom	Germany	Rest of Europe	Total
Fair value of dedicated financial assets as of January 1, 2008	(6,186)	(3,531)	(49)	(112)	(9,878)
Expected return on fund assets	(316)	(203)	(2)	(1)	(522)
Net contributions	(489)	(138)	-	6	(621)
Actuarial gains and losses	573	728	5	-	1,306
Benefits paid through dedicated assets	603	161	4	(4)	764
Change rate	-	727	-	(4)	723
Other	(111)	(4)	-	6	(109)
FAIR VALUE OF DEDICATED FINANCIAL ASSETS AS OF DECEMBER 31, 2008	(5,926)	(2,260)	(42)	(109)	(8,337)

### 32.5.5 Breakdown of the value of fund assets

For France, this item includes €5,926 million of fund assets at December 31, 2008 (€6,186 million at December 31, 2007) to cover EDF's long-term employee benefit obligations allocated to retirement gratuities (covered 100%) and the specific benefits of the special pension system.

They consist of insurance contracts.

At December 31, 2008, investments under the contracts in France break down as follows:

- for retirement gratuities: 41.7% equities, 56.3% bonds and monetary instruments (respectively 44.9% and 55.1% in 2007);
- for the special pension system: 22.7% equities, 77.3% bonds and monetary instruments (respectively 23.9% and 76.1% in 2007).

In the UK, investments undertaken to cover employee benefit obligations total €2,260 million: 46% equities and 14% bonds and monetary instruments, 2% real estate property and 38% of other investments.

The actuarial gains and losses registered for the year reflect the effects of the financial market crisis on fund assets.

Translation adjustments concerning the UK relate to the fall in value of the pound sterling between December 31, 2007 and December 31, 2008.

#### 32.5.6 Post-employment and other long-term employee benefit expenses

(in millions of euros)	12.31.2008	12.31.2007
Current year service cost	(584)	(763)
Interest expense (current value method)	(1,228)	(1,140)
Expected return on fund assets	522	445
Actuarial gains and losses recorded during the year	(29)	(53)
Effect on curtailment or settlement of a plan	2	8
Cost of past service vested	144	(2)
Effects of limit	10	(10)
NET CHARGES RELATED TO POST-EMPLOYMENT BENEFITS AND OTHER LONG-TERM BENEFITS	(1,163)	(1,515)

# 32.6

## Other provisions and contingent liabilities

Details of changes in other provisions are as follows:

#### 32.6.1 At December 31, 2008

	12.31.2007	Increases	Decreases		Other	12.31.2008
(in millions of euros)			Utilizations	Reversals	changes	
Provisions for contingencies related to investments	157	15	(3)	(3)	(12)	154
Provisions for tax liabilities	147	62	(2)	-	(4)	203
Provisions for litigation	576	100	(155)	(40)	14	495
Provisions for onerous contracts	302	72	(82)	(43)	(8)	241
Other	2,680	2,605	(1,378)	(134)	(128)	3,645
OTHER PROVISIONS	3,862	2,854	(1,620)	(220)	(138)	4,738

#### 32.6.2 At December 31, 2007

	12.31.2006	Increases	creases Decreases		Other	12.31.2007
(in millions of euros)			Utilizations	Reversals	changes	
Provisions for contingencies related to investment	ts 118	37	(1)	(1)	4	157
Provisions for tax liabilities	151	28	(1)	(31)	-	147
Provisions for litigation	562	108	(58)	(43)	7	576
Provisions for onerous contracts	406	86	(128)	(53)	(9)	302
Other	2,772	1,236	(911)	(354)	(63)	2,680
OTHER PROVISIONS	4,009	1,495	(1,099)	(482)	(61)	3,862

#### 32.6.3 Other provisions

The heading "Other" includes in particular:

- a provision of €1,263 million established following prolongation of the transition tariff system (tarif réglementé transitoire d'ajustement du marché - TaRTAM) to June 30, 2010 in application of the Law of August 4, 2008 on economic modernization;
- a provision of €88 million to cover the contribution to be paid by EDF in respect of its contribution for the initial period of the transition tariff system, which ends on June 30, 2009 (€497 million at December 31, 2007);
- a provision of €329 million to cover EDF's share of the expenses relating to future work programs adopted by the Fonds d'Amortissement des Charges d'Électrification (Face) (sinking fund for electrification charges), (€334 million at December 31, 2007);
- a provision of €383 million for the contribution to preserve entitlements to unregulated benefits related to agreements signed with the complementary pension organizations (€368 million at December 31, 2007);
- provisions of €397 million for greenhouse gas emission quotas, based on historical purchase prices (€205 million at December 31, 2007);
- provisions of € 168 million relating to renewable energy certificates.

The heading "Provisions for litigation" is €81 million lower than at December 31, 2007, as an amount of €140 million was reversed from provisions and a net expense of €147 million was recognized when an agreement was reached with social security bodies.

#### 32.6.4 Contingent liabilities

#### - TAX INSPECTION

In 2008 EDF underwent a tax inspection covering the tax years 2004, 2005 and 2006

At the end of the year, the company was notified of a proposed tax reassessment for tax years 2004 and 2005 amounting to €219 million including late payment penalties.

EDF is contesting all the corrections notified.

RTE EDF Transport also underwent a tax inspection in 2008 covering the tax year 2005.

At the end of the year, the company was notified of a proposed tax reassessment amounting to €24 million including late payment penalties.

RTE EDF Transport is contesting all the corrections notified.

#### - Solaire Direct

On May 19, 2008, Solaire Direct filed a complaint and an application for interim measures with France's Competition Council (Conseil de la Concurrence), alleging that "practices by the EDF group and its subsidiaries on the global services market for photovoltaic electricity generation" constituted abuse of a dominant market position likely to hinder the arrival and growth of new entrants on that market. In particular, it claimed that EDF's sales network was being used to promote the activities of the subsidiary EDF-ENR, jointly owned with EDF-EN.

#### - Labor litigation

EDF is party to a number of labor lawsuits with employees, primarily regarding the calculation and implementation of rest periods. EDF estimates that none of these lawsuits, individually, is likely to have a significant impact on its profits and financial position. However, because they concern situations likely to involve a large number of EDF's employees in France, these litigations could present a systemic risk which could have a material, negative impact on the Group's financial results.

#### - EDIPOWER

Proceedings are continuing in the action brought before the court of Rome by ACEA against several parties, including among others AEM Spa (now named A2A Spa), EDF, Edipower Spa and Edison Spa. ACEA is claiming that the joint level of investment in Edison by EDF and AEM violates the 30% limit applicable to public companies' stakes in Edipower, as set by the decree of November 8, 2000. It argues that exceeding the 30% limit constitutes unfair competition as defined by the Italian Civil Code, and is detrimental to ACEA. Consequently ACEA is claiming compensation and asking for measures to be taken to put an end to the situation, for example divestment of investments held in excess of the stated level and a ban on receiving energy generated by Edipower above the authorized quantities.

#### - STATEMENT OF OBJECTIONS FROM THE EUROPEAN COMMISSION

EDF has received a statement of objections from the European Commission's Directorate General for competition, relating to the longterm contracts concluded by the Group in France with electricity endusers, and major industrial customers in particular. The Commission claims that these contracts are likely to restrict access to the French electricity market and may constitute abuse of a dominant market position.

# Specific French public electricity distribution concession liabilities for existing assets and assets to be replaced

The changes in specific concession liabilities for existing assets and assets to be replaced are as follows at December 31, 2008:

(in millions of euros)	12.31.2007	Change over the period	12.31.2008
Value in kind of assets	35,236	1,427	36,663
Unamortized financing by the operator	(17,009)	(629)	(17,638)
Rights in existing assets - net value	18,227	798	19,025
Amortization of financing by the grantor	7,871	489	8,360
Provision for renewal	10,859	272	11,131
Rights in assets to be replaced	18,730	761	19,491
SPECIFIC FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSION LIABILITIES FOR EXISTING ASSETS AND ASSETS TO BE REPLACED	36,957	1,559	38,516

## Note

## **Current and non-current financial liabilities**

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# 34.1

### Breakdown between current and non-current financial liabilities

Current and non-current financial liabilities break down as follows:

	12.31.2008			12.31.2007			
(in millions of euros)	Non-current	Current	Total	Non-current	Current	Total	
Loans and other financial liabilities	25,416	12,035	37,451	17,417	10,513	27,930	
Negative fair value of derivatives held for trading	-	3,232	3,232	-	5,582	5,582	
Negative fair value of hedging derivatives	168	3,691	3,859	190	823	1,013	
FINANCIAL LIABILITIES	25,584	18,958	44,542	17,607	16,918	34,525	

The fair value of derivatives is mostly determined on the basis of listed prices and market data (see note 2.16.1.6.2)

## Loans and other financial liabilities

### 34.2.1 Changes in loans and other financial liabilities

(in millions of euros)	Bonds	Loans from financial institutions	Other financial liabilities	Loans linked to finance leased assets	Accrued interest	Total
Balances at 12.31.2006	18,428	4,728	4,073	365	548	28,142
Increases	229	1,749	5,530	-	61	7,569
Decreases	(3,193)	(2,316)	(1,233)	(55)	(161)	(6,958)
Changes in scope of consolidation	(69)	(42)	67	(40)	(3)	(87)
Translation adjustments	(412)	(97)	(124)	1	(34)	(666)
Other	(40)	146	(175)	(34)	33	(70)
Balances at 12.31.2007	14,943	4,168	8,138	237	444	27,930
Increases	10,649	2,783	2,319	-	196	15,947
Decreases	(1,425)	(2,064)	(1,989)	(61)	(41)	(5,580)
Changes in scope of consolidation	3	23	(116)	-	-	(90)
Translation adjustments	(874)	(13)	24	-	(55)	(918)
Other	194	(38)	(84)	59	31	162
BALANCES AT 12.31.2008	23,490	4,859	8,292	235	575	37,451

The Group undertook bond issues during 2008 for a total amount equivalent to €10.6 billion, as described in note 5.1.1.

Loans from financial institutions primarily include the new loans contracted by EDF Énergies Nouvelles.

The loans and other financial liabilities of the Group's major entities are as follows:

(in millions of euros)	12.31.2008	12.31.2007
EDF SA and other affiliated subsidiaries*	21,303	15,726
EDF Energy	7,668	6,146
EnBW	2,551	1,921
EDF Énergies Nouvelles	1,916	1,015
Edison	1,572	1,436

<sup>\*</sup> ERDF, RTE, PEI, EDF International and EDF Investissement Groupe.

At December 31, 2008, none of these entities was in default on any borrowing.

Group borrowings exceeding €750 million at December 31, 2008, are as follows:

(in millions of euros)	Entity	Issue	Maturity	Issuance Amount	Currency	Rate
Bond	EDF	1999	2009	1,996	EUR	5.0%
Euro MTN	EDF	2000	2010	1,000	EUR	5.8%
Euro MTN	EDF	2001	2016	1,100	EUR	5.5%
Bond	EnBW	2002	2012	1,000	EUR	5.9%
Euro MTN	EDF	2003	2033	850	EUR	5.6%
Bond	TDE	2005	2012	1,200	EUR	Euribor 3 months
Bond	RTE EDF Transport	2006	2016	1,000	EUR	4.1%
Bond	Edison	2007	2011	900	EUR	Euribor 3 months
Euro MTN	EDF SA	2008	2018	1,500	EUR	5.0%
Euro MTN	EDF SA	2008	2020	1,200	EUR	5.4%
Euro MTN	EDF SA	2008	2013	2,000	EUR	5.6%
Euro MTN	EDF SA	2008	2013	1,350	CHF	3.4%
Bond	EnBW	2008	2013	750	EUR	6.0%
Bond	EnBW	2008	2018	750	EUR	6.9%
Bond	RTE EDF Transport	2008	2015	1,250	EUR	4.9%
Bond	RTE EDF Transport	2008	2018	1,000	EUR	5.1%

## 34.2.2 Maturity of loans and other financial liabilities

(in millions of euros)	Bonds	Loans from financial institutions	Other financial liabilities	Loans linked to finance leased assets	Accrued interest	Total
Less than one year	1,362	1,176	7,511	30	434	10,513
From one to five years	5,881	1,856	277	142	5	8,161
More than five years	7,700	1,136	350	65	5	9,256
Loans and financial liabilities at 12.31.2007	14,943	4,168	8,138	237	444	27,930
Less than one year	2,090	1,872	7,467	36	570	12,035
From one to five years	8,118	1,684	449	151	5	10,407
More than five years	13,282	1,303	376	48	-	15,009
LOANS AND FINANCIAL LIABILITIES AT 12.31.2008	23,490	4,859	8,292	235	575	37,451

As a result of termination of long-term electricity purchase agreements (PPAs) in Hungary following the decision of the European Commission, the borrowings of Bert became immediately repayable. The company's debts have therefore been reclassified as maturing in less than one year.

### 34.2.3 Breakdown of loans by currency

		12.31.2008		12.31.2007			
(in millions of euros)	Initial debt structure	Impact of hedging derivatives <sup>(1)</sup>	Debt structure after hedging derivatives	Initial debt structure	Impact of hedging derivatives <sup>(1)</sup>	Debt structure after hedging derivatives	
Euro (EUR)	28,326	(3,499)	24,827	19,774	(3,953)	15,821	
American Dollar (USD)	2,273	(692)	1,581	2,748	(1,766)	982	
Pound sterling (GBP)	4,152	4,225	8,377	3,987	5,102	9,089	
Other	2,700	(34)	2,666	1,421	617	2,038	
LOANS AND FINANCIAL LIABILITIES	37,451		37,451	27,930		27,930	

<sup>(1)</sup> Hedges of liabilities and net assets of foreign subsidiaries, and USD/GBP swaps qualified as economic hedges.

### 34.2.4 Breakdown of loans by type of interest rate, before and after swaps

	12.31.2008			12.31.2007		
(in millions of euros)	Initial debt structure	Impact of derivatives	Debt structure after derivatives	Initial debt structure	Impact of derivatives	Debt structure after derivatives
Fixed rates	29,680	739	30,419	21,511	1,042	22,553
Floating rates	7,771	(739)	7,032	6,419	(1,042)	5,377
LOANS AND FINANCIAL LIABILITIES	37,451	-	37,451	27,930	-	27,930

The breakdown of loans and financial liabilities by interest rate includes the impact of all derivatives designated as hedges in accordance with IAS 39.

#### 34.2.5 Credit lines

At December 31, 2008, the Group has credit lines with various banks totaling €21,388 million (€10,066 million at December 31, 2007).

		12.31.2008			12.31.2007
			Maturity		_
(in millions of euros)	Total	< 1 year	1 - 5 years	> 5 years	Total
CONFIRMED CREDIT LINES	21,388	6,541	13,839	1,008	10,066

The increase since 2007 is mainly due to a syndicated loan of £11 billion contracted by EDF with a view to financing the purchase of British Energy.

### 34.2.6 Fair value of loans and other financial liabilities at December 31, 2008

	12.3	12.31.2008		31.2007
(in millions of euros)	Fair value	Net book value	Fair value	Net book value
LOANS AND FINANCIAL LIABILITIES	36,587	37,451	28,966	27,930

#### 34.3 **Net indebtedness**

Net indebtedness comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or securities with initial maturity of over three months, that are readily convertible into cash regardless of their maturity and are managed according to a liquidity-oriented policy.

(in millions of euros)	Notes	12.31.2008	12.31.2007
Loans and other financial liabilities		37,451	27,930
Derivatives used to hedge liabilities		(381)	23
Cash and cash equivalents	29	(5,869)	(6,035)
Liquid assets	25.3.1 and 25.3.2	(6,725) <sup>(1)</sup>	(5,682) <sup>(2)</sup>
Net financial liabilities from companies disclosed in non-current liabilities related to assets classified as held for sale		-	33
NET INDEBTEDNESS		24,476	16,269

<sup>(1)</sup> Available-for-sale financial assets: €6,651 million, financial assets carried at fair value: €74 million.

<sup>(2)</sup> Available-for-sale financial assets: €5,602 million, financial assets carried at fair value: €80 million.

## **Changes in net indebtedness**

(in millions of euros)	2008	2007
Operating profit before depreciation and amortization (EBITDA)	14,240	15,210
Cancellation of non-monetary items included in EBITDA	(3,699)	(1,584)
Change in net working capital	(211)	(269)
Other items	30	23
Net cash flow from operations	10,360	13,380
Acquisitions of property, plant and equipment and intangible assets net of disposals	(9,489)	(7,261)
Net financial expenses disbursed	(1,068)	(921)
Income tax paid	(1,720)	(2,237)
Free cash flow	(1,917)	2,961
Investments (including investments in consolidated companies) (1)	(6,090)	(2,634)
Dividends paid	(2,528)	(3,260)
Other items <sup>(2)</sup>	479	621
Monetary decrease in net indebtedness, excluding the impact of changes in scope of consolidation and exchanges rates	(10,056)	(2,312)
Effect of change in scope of consolidation	138	198
Effect of exchange rate fluctuations (3)	1,473	622
Other non-monetary changes	238	155
(Increase) / decrease in net indebtedness	(8,207)	(1,337)
Net indebtedness at beginning of period	16,269	14,932
NET INDEBTEDNESS AT END OF PERIOD	24,476	16,269

<sup>(1)</sup> The main financial investments for 2008 are described below.

Changes in net indebtedness in 2008 result primarily from:

- the faster pace of the investment program;
- acquisition of a 26.5% interest in British Energy for €2,679 million in September 2008 (see note 4.1);
- a €1,785 million gross allocation to dedicated assets;
- a further 4.54% investment in Constellation Energy for €412 million;
- € 854 million for the cash contribution and share of the transaction costs paid by EDF to Constellation under the agreement of December 17, 2008 (see note 4.2).

Changes in net indebtedness in 2007 included the impact of a €2,397 million cash allocation to dedicated assets (see note 25.3.2.1).

# 34.5

## **Guarantees of borrowings**

Guarantees of borrowings by the Group at December 31, 2008 comprise the following:

		12.31.2008			12.31.2007
			Maturity		
(in millions of euros)	Total	< 1 year	1 - 5 years	> 5 years	Total
Security interests in real property	2,166	148	1,162	856	2,102
Guarantees related to borrowings	429	166	30	233	419
Other financing commitments	564	534	4	26	190
FINANCING COMMITMENTS GIVEN	3,159	848	1,196	1,115	2,711
FINANCING COMMITMENTS RECEIVED*	69	41	18	10	114

<sup>\*</sup> Excluding credit lines (see note 34.2.5).

<sup>(2)</sup> The change includes the impact of Edison warrants exercised in 2007 (€112 million).

<sup>(3)</sup> The change mainly relates to the fall in the value of the pound sterling between December 31, 2007 and December 31, 2008.

Security interests in real property and assets provided as guarantees mainly concern property, plant and equipment and take the form of pledges or mortgages, and shares representing investments in consolidated subsidiaries which own property, plant and equipment. The net book value of current and non-current assets given as guarantees is €2,166 million (€2,102 million in 2007).

Guarantees of borrowings were principally given by EDF, EDF International and EDF Energy.

Changes in financing commitments during 2008 include €431 million (\$600 million), corresponding to the interim backstop borrowing facility granted to Constellation (see note 4.2).

Financing commitments received mainly concern EDF and Unistar Nuclear

# Note

## Management of financial risks

As an operator in the energy sector worldwide, the EDF group is exposed to risks related to interest rates, exchange rates and fluctuations in commodity prices. The Group uses derivatives in various hedging strategies to eliminate or limit these financial risks, but not for speculative purposes.

To that end, the Group has set up a dedicated body responsible for defining the risk management policy and its governing principles, and supervising their correct application.

EDF entities and Group subsidiaries, particularly EDF Trading, EDF Energy, EnBW and Edison have adapted these principles as appropriate for management of the risks inherent to their business.

Risks related to exchange rate, interest rate and commodity price fluctuations create volatility affecting Group results, equity and cash flows.

The main derivatives used are forward exchange contracts and currency swaps, interest rate swaps, cross currency swaps and commodity futures, forwards and swaps.

The equity risk lies essentially in the portfolio to cover nuclear obligations, and to a lesser degree in long-term investments for EDF's cash management.

On the energy markets, the Group enters into trading operations on the wholesale electricity, CO2 and fossil fuel markets, mainly through its subsidiary EDF Trading. EDF Trading's spot and forward transactions mostly involve instruments such as forward contracts (with or without physical delivery), swaps and options.

While EDF Trading is responsible for controlling its own exposure to energy

market risks, its commitments on the markets are also managed at Group level through a "Value at risk" (VaR) limit with a stop-loss limit.

The credit risk covers the risk of unpaid trade receivables and the risk of default on contractual obligations by counterparties, and the Group has an appropriate risk management policy. For counterparty risks, EDF Trading has set up a management system based on the four following principles:

- quantitative and qualitative analysis of all counterparties, in order to define limits for exposure to counterparty risks; these limits are approved by EDF Trading's Credit Committee;
- daily measurement of risk exposure; EDF Trading measures the credit risk based on future payments and the cost of replacing contracts on the markets:
- daily management of limits, involving monitoring and reporting of overall exposure.
- 90% of EDF Trading's credit exposure concerns "investment grade" counterparties.

Regarding the risk of customer default, another component of the counterparty risk, a statement of receivables not yet due and overdue is shown in note 27.

The 2008 Management Report (section 1.10) supplies additional information to complement this note.

## **Derivatives and hedge accounting**

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Hedge accounting is applied in compliance with IAS 39, and concerns interest rate derivatives used to hedge long-term indebtedness, currency derivatives used to hedge net foreign investments and debts in foreign

currencies, and currency and commodity derivatives used to hedge future cash flows.

The fair value of hedging derivatives reported in the balance sheet at December 31, 2008 breaks down as follows:

(in millions of euros)	Notes	12.31.2008
Positive fair value of hedging derivatives	25.1	3,705
Negative fair value of hedging derivatives	34.1	(3,859)
FAIR VALUE OF HEDGING DERIVATIVES		(154)
Including Interest rate hedging derivatives	36.4.1	(64)
Including Foreign currency hedges	36.4.2	1,795
Including Cash flow hedge commodity derivatives	36.4.3	(1,851)
Including Commodity-related fair value hedges	36.5	(34)

# 36.1

## Fair value hedges

The EDF group hedges the exposure to changes in the fair value of fixed-rate debts. The derivatives used for this hedging are fixed/floating interest rate swaps and cross currency swaps, with changes in fair value recorded in the income statement. Fair value hedges also include currency hedging instruments on certain firm purchase commitments.

# 36.2

## **Cash flow hedges**

The EDF group uses cash flow hedging principally for the following purposes:  $\frac{1}{2} \left( \frac{1}{2} \right) = \frac{1}{2} \left( \frac{1}{2} \right) \left($ 

- to hedge its floating-rate debt, using interest-rate swaps (floating/fixed
- to hedge the exchange rate risk related to debts contracted in foreign currencies, using currency swaps;
- to hedge future cash flows related to expected sales and purchases of electricity, gas, coal and nuclear fuel, using futures, forwards and swaps.

The EDF group also hedges the currency risk inherent to certain firm commitments to purchase materials and fuels.

At December 31, 2008, the ineffective portion of cash flow hedges represents a loss of  $\mathfrak{C}5$  million (gain of  $\mathfrak{C}3$  million at December 31, 2007).

# 36.3

#### Hedges of net investments in foreign entities

Hedging of net foreign investments is used for protection against exposure to the exchange rate risk related to net investments in the Group's foreign entities.

This risk is hedged at group level either by contracting debts for investments in the same currency, or through the markets, in which case the Group uses currency swaps and forward exchange contracts.

The ineffective portion of hedges of net investments in foreign entities was practically nil (it represented a loss of €2 million at December 31, 2007).

# 6.4

#### Impact of hedging derivatives on equity

Changes in the fair value of hedging derivatives included in equity over the year are as follows:

#### - In 2008

(in millions of euros)	Gross changes in fair value recorded in equity <sup>(1)</sup>	Taxes related to gross changes in fair value recorded in equity	Changes after taxes in fair value recorded in equity (1)	Ineffectiveness	Gross changes in fair value transferred to income <sup>(2)</sup>	Taxes related to changes in fair value transferred to income	Changes after taxes in fair value transferred to income <sup>(2)</sup>
Derivatives on:							
- interest rate hedging	(90)	20	(70)	(2)	-	-	-
- exchange rate hedging	362	(106)	256	-	(62)	21	(41)
- net foreign exchange hedging	857	(294)	563	-	-	-	-
- commodities hedging	(3,216)	1,012	(2,204)	(3)	(296)	90	(206)
HEDGING DERIVATIVES	(2,087)	632	1,455	(5)	(358)	111	(247)

<sup>(1) + / ():</sup> increase/decrease in equity.

The main components of the €2,204 million negative change, after tax, in the fair value of commodity hedging derivatives are:

- €(1,137) million on electricity hedging contracts (€(67) million in 2007);
- €(434) million on coal hedging contracts (+€502 million at December 31, 2007);
- € (306) million on oil product hedging contracts (+€58 million at December 31, 2007).

The main components of the amount of €(206) million after tax transferred to income in respect of commodity hedges terminated during the year are:

- €(339) million on electricity hedging contracts (€(470) million in 2007);
- €(111) million on gas hedging contracts (€(309) million at December 31, 2007);
- €+201 million on coal hedging contracts (€+132 million at December 31, 2007).

<sup>(2) + / ():</sup> increase/decrease in net income.

#### Consolidated financial statements

#### - IN 2007

(in millions of euros)	Gross changes in fair value recorded in equity <sup>(1)</sup>	Taxes related to gross changes in fair value recorded in equity	Changes after taxes in fair value recorded in equity (1)	Ineffectiveness	Gross changes in fair value transferred to income <sup>(2)</sup>	Taxes related to changes in fair value transferred to income	Changes after taxes in fair value transferred to income <sup>(2)</sup>
Derivatives on:							_
- interest rate hedging	(5)	(2)	(7)	1	(14)	4	(10)
- exchange rate hedging	(99)	34	(65)	-	(7)	3	(4)
- net foreign exchange hedging	g 251	(86)	165	(2)	1	-	1
- commodities hedging	944	(317)	627	2	(1,115)	301	(814)
HEDGING DERIVATIVES	1,091	(371)	720	1	(1,135)	308	(827)

<sup>(1) + / ():</sup> increase/decrease in equity.

#### 36.4.1 Interest rate hedging derivatives

Interest rate hedging derivatives are swaps and break down as follows:

		Notional at	12.31.2008	Notional at 12.31.2007	Fair value		
(in millions of euros)	< 1 year	1 to 5 years	> 5 years	Total	Total	12.31.2008	12.31.2007
Interest rate transactions	2	6	-	8	-	2	1
Fixed rate payer/floating rate receive	r 276	1,208	491	1,975	2,070	(101)	21
Floating rate payer/fixed rate receive	r 200	265	763	1,228	792	53	1
Variable /variable	-	241	-	241	130	(18)	20
Interest rate swaps	476	1,714	1,254	3,444	2,992	(66)	42
Embedded rate derivatives	-	-	-	-	-	-	-
INTEREST RATE HEDGING DERIVATIVES	478	1,720	1,254	3,452	2,992	(64)	43

The fair value of interest rate/exchange rate cross-currency swaps comprises the interest rate effect only.

#### 36.4.2 Exchange rate hedging derivatives

Exchange rate hedging derivatives break down as follows:

#### - AT DECEMBER 31, 2008

	Notional a	amount to be	received at 12	.31.2008	Notiona	Fair value			
(in millions of euros)	< 1 year	1 - 5 years	> 5 years	Total	< 1 year	1 - 5 years	> 5 years	Total	12.31.2008
Forward exchange transactions	4,809	3,711	73	8,593	5,914	3,868	35	9,817	539
Swaps	4,456	3,085	2,126	9,667	3,809	2,502	1,469	7,780	1,246
Options	502	-	-	502	502	-	-	502	10
FOREIGN CURRENCY HEDGES	9,767	6,796	2,199	18,762	10,225	6,370	1,504	18,099	1,795

#### - AT DECEMBER 31, 2007

	Notional	lotional amount to be received at 12.31.2007				Notional amount to be given at 12.31.2007				
(in millions of euros)	< 1 year	1 - 5 years	> 5 years	Total	< 1 year	1 - 5 years	> 5 years	Total	12.31.2007	
Forward exchange transactions	2,904	3,191	-	6,095	2,690	3,062	-	5,752	(7)	
Swaps	1,841	1,685	2,152	5,678	1,837	1,689	1,981	5,507	159	
Options	1,523	-	-	1,523	1,514	-	-	1,514	9	
FOREIGN CURRENCY HEDGES	6,268	4,876	2,152	13,296	6,041	4,751	1,981	12,773	161	

The fair value of interest rate/exchange rate cross-currency swaps comprises the exchange rate effect only.

<sup>(2) + / ():</sup> increase/decrease in net income.

#### 36.4.3 Commodity-related cash flow hedges

Details of commodity-related cash flow hedges are as follows:

	Units		12.31.2	2008		12.31.2008	12.31.2007	12.31.2007
	of measure		Net noti	onals		Fair value	Net notionals	Fair value
(in millions of euros)		< 1 year	From 1 to 5 years	> 5 years	Total	•	Total	
Swaps		-	-	-	-	1	-	1
Forwards/futures		24	11	-	35	(748)	14	254
Power	TWh	24	11	-	35	(747)	14	255
Forwards/futures		800	724	-	1,524	(9)	2,233	52
Gas	Millions of therms	800	724	-	1,524	(9)	2,233	52
Swaps		15,438	4,436	-	19,874	(638)	6,522	63
Forwards/futures		477	-	-	477	(11)	-	-
Oil products	Thousands of barrels	15,915	4,436	-	20,351	(649)	6,522	63
Swaps		15	9	-	24	(403)	21	523
Forwards/futures		-	-	-	-	(2)	-	-
Coal	Millions of tonnes	15	9	-	24	(405)	21	523
Forwards/futures		8,242	9,085	-	17,327	(41)	15,061	49
CO <sub>2</sub>	Thousands of tonnes	8,242	9,085	-	17,327	(41)	15,061	49
CASH FLOW HEDG						(1,851)		942

# 36.5

## Commodity-related fair value hedges

Details of commodity-related fair value hedges are as follows:

		12.31.2008	12.31.2008	12.31.2007	12.31.2007
	Units	Net	Fair	Net	Fair
(in millions of euros)	of measure	notionals	value	notionals	value
Coal and freight	Millions of tonnes	(9)	(34)	(15)	136
FAIR VALUE HEDGING COMMODITY DERIVATIVES			(34)		136

# Note

# Derivative instruments not recorded as hedges

**37.1** Interest rate derivatives held for trading 326 37.2 Currency derivatives held for trading 327 **37.3** Commodity derivatives not classified as hedges 328

Details of the fair value of trading derivatives reported in the balance sheet at December 31, 2008 are as follows:

(in millions of euros)	Notes	12.31.2008
Derivatives - positive fair value	25.3.1	4,753
Derivatives - negative fair value	34.1	(3,232)
DERIVATIVES - FAIR VALUE		1,521
Including Interest rate derivatives held for trading	37.1	18
Including Currency derivatives held for trading	37.2	144
Including Non hedging commodity derivatives	37.3	1,359

# 37.1

## Interest rate derivatives held for trading

Interest rate derivatives held for trading break down as follows:

		Notional amou	int 12.31.2008	Notional amount 12.31.2007	Fair value		
(in millions of euros)	< 1 year	1 - 5 years	> 5 years	Total	Total	12.31.2008	12.31.2007
Purchases of CAP contracts	147	-	=	147	519	-	3
Purchases of FLOOR contracts	-	-	-	- 1	-	-	-
Sales of FLOOR contracts	294	-	-	294	665	- 1	=
Interest rate transactions	441	-	-	441	1,184	-	3
Fixed rate payer/floating rate receiver	292	182	1,488	1,962	2,804	<b>(97</b> )	(8)
Floating rate payer/fixed rate receiver	4,108	1,238	1,779	7,125	7,159	150	48
Variable /variable	167	54	-	221	559	(35)	(1)
Interest rate swaps	4,567	1,474	3,267	9,308	10,522	18	39
INTEREST RATE DERIVATIVES HELD FOR TRADING	5,008	1,474	3,267	9,749	11,706	18	42

# 37.2

# **Currency derivatives held for trading**

Currency derivatives held for trading break down as follows:

#### - AT DECEMBER 31, 2008

	Notic	onal to be rece	ived at 12.31.2	008	No	tional to be giv	en at 12.31.2	800	Fair value
(in millions of euros)	< 1 year	1 to 5 years	> 5 years	Total	< 1 year	1 to 5 years	> 5 years	Total	12.31.2008
Forward transactions	396	4,194	44	4,634	(36)	(4,124)	(44)	(4,204)	39
Swaps	3,312	17,362	-	20,674	2,928	(6,589)	-	(3,661)	106
Options	182	-	-	182	40	-	-	40	(1)
Embedded currency derivatives	-	-	-	-	-	-	-	-	-
CURRENCY DERIVATIVES HELD FOR TRADING	3,890	21,556	44	25,490	2,932	(10,713)	(44)	(7,825)	144

#### - AT DECEMBER 31, 2007

	Notional to be received at 12.31.2007					Notional to be given at 12.31.2007			
(in millions of euros)	< 1 year	1 to 5 years	> 5 years	Total	< 1 year	1 to 5 years	> 5 years	Total	12.31.2007
Forward transactions	2,123	540	35	2,698	2,045	501	35	2,581	12
Swaps	2,979	929	-	3,908	2,967	883	-	3,850	71
Options	208	-	-	208	204	-	-	204	-
Embedded currency derivatives	-	-	-	-	-	-	-	-	(42)
CURRENCY DERIVATIVES HELD FOR TRADING	5,310	1,469	35	6,814	5,216	1,384	35	6,635	41

# 37.3

# Commodity derivatives not classified as hedges

Details of commodity derivatives not classified as hedges are as follows:

		12.31.2008	12.31.2008	12.31.2007	12.31.2007
	Units of	Net	Fair	Net	Fair
(in millions of euros)	measure	notionals	value	notionals	value
Swaps		(2)	(19)	-	(50)
Options		13	(92)	18	(162)
Forwards/futures		(20)	152	(8)	(55)
Power	TWh	(9)	41	10	(267)
Swaps		- 1	8	(7)	(177)
Options		86,466	54	81,407	363
Forwards/futures		(1,232)	202	(510)	12
Gas	Millions of therms	85,234	264	80,890	198
Swaps		(13,712)	68	(19,273)	97
Options		1,200	8	(1,814)	6
Forwards/futures		1,680	(39)	2,087	19
Oil products	Thousands of barrels	(10,832)	37	(19,000)	122
Swaps		(63)	651	(48)	(761)
Options		-	-	1	7
Forwards/futures		87	51	56	983
Freight		11	75	17	(196)
Coal	Millions of tonnes	35	777	26	33
Swaps		-	(30)	-	-
Options		-	-	1,540	1
Forwards/futures		5,726	269	(7,871)	127
CO <sub>2</sub>	Thousands of tonnes	5,726	239	(6,331)	128
Embedded commodity derivatives			1		4
NON HEDGING COMMODITY DERIVATIVES			1,359		218

These mainly include contracts included in EDF Trading's portfolio.

# Note

## Other liabilities

Details of other liabilities are as follows:

(in millions of euros)	12.31.2008	12.31.2007
Advances received	4,783	4,279
Liabilities related to property, plant and equipment	2,096	1,133
Tax and social charges	6,671	5,735
Deferred income	8,027	7,988
Other	4,248	3,195
OTHER LIABILITIES	25,825	22,330
Non current	5,628	5,624
Current	20,197	16,706

At December 31, 2008, deferred income includes €2,317 million (€2,479 million at December 31, 2007) of partner advances to EDF under the nuclear plant financing plans, and €2,529 million of connection fees for ERDF and EDF (€2,436 million at December 31, 2007).

"Other liabilities" include liabilities related to the commitments to repurchase minority interests amounting to €237 million (€228 million at December 31, 2007). They also include the borrowings of Domofinance, a credit institution that finances works and installations contributing to energy control (€261 million (€136 million at December 31, 2007)).

# Note

# **Contribution of joint ventures**

The Group holds investments in joint ventures (see note 43). As stated in note 2.3, these investments are proportionally consolidated.

The joint ventures' contributions to the consolidated balance sheet and income statement are as follows:

#### - AT DECEMBER 31, 2008

(in millions of euros)	% owned	Current Assets	Non Current Assets	Current liabilities	Non current liabilities	Sales	Operating profit before depreciation and amortization
EnBW	46.07%	5,289	11,260	4,214	7,903	7,467	1,114
Edison	48.96%	1,604	6,434	1,725	1,949	5,435	807
Other		2,879	5,640	2,443	1,022	2,665	341
TOTAL		9,772	23,334	8,382	10,874	15,567	2,262

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#### - AT DECEMBER 31, 2007

(in millions of euros)	% owned	Current Assets	Non Current Assets	Current liabilities	Non current liabilities	Sales	Operating profit before depreciation and amortization
EnBW	46.07%	3,187	11,280	2,789	7,023	6,900	1,031
Edison	48.96%	1,202	6,610	1,206	2,164	4,121	791
Other		2,760	5,082	1,835	1,120	2,367	358
TOTAL		7,149	22,972	5,830	10,307	13,388	2,180

<sup>&</sup>quot;Other" mainly concerns Dalkia and EDF Investissement Groupe.

Note 1

# **Related parties**

**40.1** Transactions with entities included in the scope of consolidation

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**40.2** Relations with the French State and State-owned entities

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**40.3** Management compensation

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Details of transactions with related parties are as follows:

		rtionally ed companies		accounted for equity method	French S state-owne		Group	Total
(in millions of euros)	12.31.2008	12.31.2007	12.31.2008	12.31.2007	12.31.2008	12.31.2007	12.31.2008	12.31.2007
Sales	160	152	64	509	579	404	803	1,065
Fuel and energy purchases	131	83	560	265	3,739	1,709	4,430	2,057
Other external purchases	-	-	-	-	575	315	575	315
Financial assets	125	58	-	-	633	590	758	648
Other assets	126	120	15	25	985	1,046	1,126	1,191
Financial liabilities	1,083	42	-	-	-	-	1,083	42
Other liabilities	286	357	31	113	2,554	668	2,871	1,138

40.1

### Transactions with entities included in the scope of consolidation

EDF has entered into various commercial contracts with its subsidiaries and affiliates. EDF and EnBW, in particular, entered into an agreement in 2001 defining the methods of cooperation between the two companies.

Transactions with joint ventures and associates concern sales and purchases of energy.

# 40.2

#### **Relations with the French State and State-owned entities**

#### 40.2.1 Relations with the French State

The French State holds 84.66% of the capital of EDF at December 31, 2008, and is thus entitled in the same way as any majority shareholder to control decisions that require approval by the shareholders.

In accordance with the legislation applicable to all companies having the French State as their majority shareholder, EDF is subject to certain inspection procedures, in particular economic and financial inspections by the State, audits by the French Court of Auditors (Cour des Comptes) or Parliament, and verifications by the French General Finance Inspectorate (Inspection Générale des Finances).

Under an agreement entered into by the French State and the EDF group on July 27, 2001 concerning the monitoring of external investments, procedures exist for prior approval by the French State or notification (advance or otherwise) of the State in respect of certain planned investments, additional investments or disposals by the Group. This agreement also introduced a procedure for monitoring the results of external growth operations.

The public service contract between the French State and EDF was signed on October 24, 2005. This contract is intended to form the framework for public service missions entrusted by the lawmaker to EDF for an unlimited period, since the Law of August 9, 2004 simply requires a report every three years without stipulating the duration of the contract. The first threeyear report was remitted to the French government during 2008.

EDF, like other electricity producers, also participates in the multi-annual generation investment program defined by the minister in charge of energy, which sets objectives for the allocation of generation capacity.

Finally, the French State intervenes through the regulation of electricity and gas markets, particularly for authorization to build and operate generation facilities, and establishment of sales tariffs for customers that have stayed on the regulated tariffs, transmission and distribution tariffs, and the level of the Contribution to the Public Electricity Service (Contribution au service public de l'électricité or CSPE).

#### 40.2.2 Relations with GDF Suez

Since the distribution network management businesses were transferred to subsidiaries – ERDF SA, a subsidiary of EDF SA, has managed electricity distribution since January 1, 2007 and GRDF SA, a subsidiary of GDF Suez, has managed gas distribution since January 1, 2008 – the agreement defining relations between ERDF SA and GRDF SA in respect of the common operator has replaced the previous agreement between EDF SA and

The common network operator manages the local public service for energy distribution, covering network construction, operation and maintenance,

EDF and GDF Suez also have two other common services governed by contracts:

- the Health and Safety Delegation;
- the Information Technology and Telecommunications Division (DIT), which is responsible for certain information systems.

#### 40.2.3 Relations with public sector entities

The Group enters into normal business transactions with public sector entities, mainly for electricity supplies and invoicing for access to the transmission network.

Processing and transportation of nuclear fuel by AREVA for EDF account for most of the energy purchase costs from state-owned entities. Other purchases concern nuclear plant maintenance services provided by the AREVA Group.

Other assets mainly consist of advances on these purchase contracts.

The Group also holds shares in AREVA, as mentioned in note 25.3.2.3.

# 40.3

#### **Management compensation**

The Group's key management personnel are the Chairman of the Board of Directors, the Chief Officers and the external members of the Board of

The total compensation paid by EDF and controlled companies to the Group's key management personnel amounted to €4.8 million for 2008 (€5 million in 2007) and covered short-term benefits (salaries, the variable portion paid in 2008, profit share, director's fees and benefits in kind) and the corresponding employer contributions. The decrease from 2007 is mainly attributable to changes in bonuses.

Management personnel who belong to the IEG regime also benefit from employee benefits (as defined by IAS 19) attached to that status. The past service cost related to these benefits for 2008 is €0.3 million (€0.4 million for 2007).

Other than the benefits reported above, key management personnel benefit from no other special pension system, starting bonus or severance payment

They benefited from the free share plan ACT 2007 in the same way as other EDF group employees. Given the terms of attribution and the employee offering, the shares concerned by ACT 2007 will not be delivered until 2009.

Management personnel also received the benefits granted to employees through the Employee Offering of September 2008: discounted share prices, attribution of free shares and a contribution made by EDF to the benefit of personnel.

Note	Environment	
41	<b>41.1</b> Greenhouse gas emission quotas	332
7.4	41.2 Energy savings certificates	332
	41.3 Renewable energy certificates	332

#### 41.1 **Greenhouse gas emission quotas**

In application of the Kyoto protocol, the EU Directive aiming to reduce greenhouse gas emission levels by attributing emission quotas came into effect in 2005, for an initial three-year period which ended on December 31, 2007 and was marked by a reduction in the volumes of quotas allocated.

The second allocation period runs from 2008 to 2012.

In the EDF group, the companies subject to this Directive are EDF, EnBW, EDF Energy, Edison, Fenice, Dalkia International and Dalkia Investissement, Bert, Demasz, Kogeneracia, Zielonagora, ECK, ERSA, ECW and EDF Énergies Nouvelles.

In 2008, the Group surrendered 91 million tonnes in respect of emissions generated in 2007. In 2007, the Group surrendered 69 million tonnes in respect of emissions generated in 2006.

The Group's total quota allocation for 2008 recorded in the national registers is 67 million tonnes (85 million tonnes for 2007).

The volume of emissions at December 31, 2008 stood at 84 million tonnes (90 million tonnes at December 31, 2007). The provision resulting from over-quota emissions amounts to €397 million and covers the shortfall in quotas at the end of 2008 (€205 million at December 31, 2007).

As part of the Clean Development Mechanism defined in the Kyoto protocol, the Group set up a Carbon Fund in late 2006, with the aim of supporting projects to reduce greenhouse gas emissions in emerging countries, and benefiting from carbon emission permits. This fund involves EDF and all the European entities, and is managed by EDF Trading.

CER credit purchases through the Carbon Fund amount to €176 million at December 31, 2008 (€ 120.4 million at December 31, 2007).

#### 41.2 **Energy savings certificates**

In all its subsidiaries, the Group is engaged in a process to control energy consumption through various measures developed by national legislations, in application of European Union Directives.

The French Law of July 13, 2005 introduced a system of energy savings certificates. Companies selling electricity, gas, heat or cold to end-users with sales above a certain level are subject to energy savings obligations for a three-year period running till June 30, 2009. They fulfill these obligations by making direct or indirect energy savings rewarded by certificates, or by purchasing energy savings certificates. At the end of the three years, the entities concerned must provide evidence of compliance with obligations by surrendering the certificates, or pay a fine to the Treasury.

For the Group's French companies, the obligation is to save 30.2 TWh over the three-year period.

At December 31, 2008, EDF and other Group subsidiaries have plans in action to obtain their energy savings certificates by the end of the period, and certificates for an amount of 23 TWh had been awarded at that date (4.7 TWh at December 31, 2007).

#### 41.3 Renewable energy certificates

In the United Kingdom, Poland and Italy, certificates are awarded when electricity is generated from renewable energy sources, to encourage greater use of renewable energies through a compensation system for generation costs and an obligation for energy suppliers to sell a certain quantity of renewable energy. In practice, the generator or supplier must provide proof that the obligation has been fulfilled or surrender the renewable energy certificates gained or purchased. Similar systems have been introduced for cogeneration.

#### Note **Subsequent events 42.1** Atel 333 **42.2** British Energy 333 42.3 Bond issues 333 42.4 Construction of a second EPR 333

#### **42.1 Atel**

Under the terms of an agreement signed on December 18, 2008, EDF decided on January 15, 2009 to contribute to the new company Alpiq Holding SA its energy rights from the Emosson dam, valued at CHF 720 million (€485 million), and CHF 337 million (€227 million) in cash, through a capital increase (see note 25.5).

#### 42.2 **British Energy**

Subsequent events concerning British Energy are described in the note on the company's acquisition (note 4).

#### 42.3 **Bond issues**

On January 23, 2009 EDF issued two bonds in Euros. The first is a 6-year bond totaling €2 billion, with annual coupon of 5.125%. The second is a 12-year bond totaling €2 billion with annual coupon of 6.25%.

On January 26, 2009, EDF issued a \$5 billion bond on the US market in the form of a private placement reserved for institutional investors (issue governed by Rule 144A of the US Securities and Exchange Commission), in three tranches:

• a 5-year \$1.25 billion tranche with coupon of 5.50%;

- a 10-year \$2 billion tranche with coupon of 6.50%;
- a 30-year \$1.75 billion tranche with coupon of 6.95%.

These operations contribute to financing of the group's strategy and early repayment of the bank loan contracted to acquire British Energy, used in January 2009.

#### 42.4 Construction of a second EPR

The French government confirmed on January 30, 2009 that it intends to construct a second EPR in a project led by EDF at Penly in Normandy.

EDF will present the project to its governing bodies.

EDF will work with other industrial groups on this second French EPR, particularly GDF Suez, through partnerships with entities such as Electrabel, which already took part in construction of the Chooz and Tricastin plants, and Enel, which has participated more recently in the future EPR project at Flamanville.

# Note

# **Scope of consolidation**

The scope of consolidation at December 31, 2008 is as follows:

Company		Head office	% owned	% voting rights	Consolidation method	Business sector
FRANCE						
Électricité de France	(1)		100	100	Parent company	G,D,S
RTE EDF Transport	(1)		100	100	FC	Т
Électricité Réseau Distribution France	(1)		100	100	FC	D
PEI Group	(1)		100	100	FC	P
UNITED KINGDOM						
EDF Energy	(3)		100	100	FC	G,D,S
GERMANY						
EnBW	(3)		46.07	46.07	PC	G,D,S,T
ITALY						
Edison	(3)		48.96	50	PC	G,D,S
Transalpina di Energia (TdE)			50	50	PC	S
Italenergia Bis			100	100	FC	S
Wagram 1			100	100	FC	S
Wagram 4			100	100	FC	S
Fenice	(3)		100	100	FC	G
REST OF EUROPE						
EDF Trading	(3)	United Kingdom	100	100	FC	S
EDF International	(1)	France	100	100	FC	S
ECK Cracovie		Poland	66.26	66.26	FC	G
Kogeneracja		Poland	35.61	50	FC	G
ECW		Poland	99.66	99.66	FC	G
ERSA (Rybnik)		Poland	79.59	97.11	FC	G
Zielona Gora		Poland	35.56	99.87	FC	G, D
Demasz	(3)	Hungary	100	100	FC	D
Bert		Hungary	95.57	95.57	FC	G
Société d'Investissement en Autriche		France	80	80	FC	S
Groupe ESTAG		Austria	20	25	EM	G,S
SSE		Slovakia	49	49	PC	D
Groupe ATEL		Switzerland	24.83	25	EM	G,D,S,T
EDF Alpes Investissements		Switzerland	100	100	FC	S
EDF Development UK Ltd		United Kingdom	100	100	FC	G
EDF Production UK Ltd		United Kingdom	100	100	FC	G
Emosson		Switzerland	50	50	PC	G
EDF Belgium		Belgium	100	100	FC	G
Finelex BV		Netherlands	100	100	FC	G

Company		Head office	% owned	% voting rights	Consolidation method	Business sector
Cinergy Holding Company BV		Netherlands	50	50	PC	G
Hispaelec		Spain	100	100	FC	G
Azito Énergie		Ivory Coast	32.85	32.85	PC	G
Dalkia Holding		France	34	34	EM	S
Edenkia		France	50	50	EM	S
Dalkia International		France	50	24.14	PC	S
Dalkia Investissement		France	67	50	PC	S
Richemont	(1)	France	100	100	FC	G
EDF Développement Environnement SA	(1)	France	100	100	FC	G
Société pour le Conditionnement des Déchets et Effluents Industriels (SOCODEI)		France	51	51	FC	S
Cofiva	(1)	France	100	100	FC	S
Sofinel		France	54.98	54.98	FC	S
Électricité de Strasbourg		France	89.07	89.07	FC	D
Tiru S.A. Traitement Industriel des Résidus Urbains	(3)	France	51	51	FC	S
EDF Énergies Nouvelles	(2) (3)	France	50	50	FC	G,S
Immobilière Wagram Étoile	(1)	France	100	100	FC	S
La Gérance Générale Foncière	(1)	France	99.86	99.86	FC	S
Immobilière PB6		France	50	50	PC	S
Société Foncière Immobilière et de Location (SOFILO)	(1)	France	100	100	FC	S
Société C2	(1)	France	100	100	FC	S
Société C3	(1)	France	100	100	FC	S
EDF Holding SAS	(1)	France	100	100	FC	S
Domofinance		France	45	45	PC	S
Fahrenheit		France	99.66	100	FC	S
Wagram Insurance Company		Ireland	100	100	FC	S
Océane Ré		Luxembourg	99.98	99.98	FC	S
EDF Investissement Groupe		Belgium	84.85	50	PC	S
SLOE Centrale Holding		Netherlands	50	50	PC	G
REST OF THE WORLD						
EDF Développement USA		USA	100	100	FC	S
Unistar Nuclear Energy		USA	50	50	PC	G
Ute Norte Fluminense		Brazil	90	90	FC	G
Ute Paracambi		Brazil	100	100	FC	G
Figlec		China	100	100	FC	G
Shandong Zhonghua Power Company		China	19.60	19.60	EM	G
Meco		Vietnam	56.25	56.25	FC	G
Nam Theun Power Company		Laos	35	35	EM	G

 $Consolidation\ methods:\ FC = full\ consolidation,\ PC = proportional\ consolidation,\ EM = accounted\ for\ under\ the\ equity\ method.$ 

Business segments: G = Generation, D = Distribution, S = Services, T = Transmission.

<sup>(1)</sup> Companies fiscally consolidated by EDF under the option initially registered on January 1, 1988.

<sup>(2)</sup> Following execution of the new shareholder agreements with the Mouratoglou group and the opening of the capital of EDF Énergies Nouvelles, EDF EN and EnXco have been fully consolidated since December 31, 2006.

<sup>(3)</sup> Group.

# Statutory Auditors Report

on the Consolidated Financial Statements

#### **Statutory Auditors' Report** on the Consolidated Financial Statements 20.2

This is a free translation into English of the Statutory Auditors' Report on the consolidated financial statements issued in the French language and is provided solely for the convenience of English speaking readers. This report includes information specifically required by French law in any auditor's report, whether modified or not. This information is presented below the opinion discussing the auditor's assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing the audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account caption or on information taken outside of the consolidated financial statements. The report also includes information relating to the specific verification of information in the group management report.

This report should be read in conjunction with, and is construed in accordance with French law and professional auditing standards applicable in France.

#### YEAR ENDED DECEMBER 31, 2008

To the Shareholders.

Following our appointment as Statutory Auditors by your Annual General Meeting, we hereby report to you on:

- the audit of the accompanying consolidated financial statements for the year ended December 31, 2008 of Électricité de France;
- the justification of our assessments;
- the specific verification required by law.

The consolidated financial statements have been approved by the Board of Directors. Our role is to express an opinion on these consolidated financial statements based on our audit.

#### 1. OPINION ON THE CONSOLIDATED FINANCIAL STATEMENTS

We conducted our audit in accordance with professional standards applicable in France. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, using sample testing techniques or other selection methods, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statements presentation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities, of the financial position of the Group as of December 31, 2008 and the results of its operations for the year then ended in accordance with IFRS as adopted by the European Union.

Without qualifying our opinion, we draw your attention to the following points described in the notes to the consolidated financial statements:

- the valuation of long-term provisions relating to nuclear electricity production, as described in notes 2.2.1 and 32.2 to 32.4 to the consolidated financial statements, results as indicated in note 2.2.1 from management's best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning;
- the approach adopted by EDF to present in the balance sheet its obligation to renew property, plant and equipment used for the French public distribution of electricity, as described in note 2.24, is based on the specific characteristics of concession contracts. The amount of contractual obligations as calculated and disclosed annually to the grantors described in activity reports is used for evaluating the obligation. An alternative approach based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life would result in a different representation of the obligation towards grantors. The impacts this approach would have had on the accounts are shown in note 2.24 for information purposes. Measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of costs and disbursement dates

#### 2. JUSTIFICATION OF ASSESSMENTS

In accordance with the requirements of article L. 823-9 of the French Commercial Code (Code de commerce) relating to the justification of our assessments, we bring to your attention the following matters:

#### **ACCOUNTING POLICIES**

As part of our assessment of the Group accounting principles and methods, we have verified the appropriateness of the disclosures presented in notes 2.4, 2.10.2, 2.12 and 2.24 with respect to the accounting treatments of commitments to purchase minority interests in a fully consolidated company, to greenhouse gas emission quotas and concessions, areas which are not mandatory or specifically addressed in IFRS as adopted in the European Union as of December 31, 2008.

#### MANAGEMENT JUDGMENTS AND ESTIMATES

Note 2.2 to the consolidated financial statements describes the main sensitive accounting policies for which management is required to make estimates and exercise judgment. Our procedures consisted in assessing these estimates, the data and assumptions on which they are based, reviewing, on a test basis, the calculations performed by the Company, comparing accounting estimates of prior periods with corresponding actual amounts, reviewing the procedures for approving these estimates by management and finally verifying that the notes to the consolidated financial statements provide appropriate disclosures with respect to the assumptions adopted by the Group.

In the current highly volatile market environment and the undeniable difficulty in determining the future economic outlook, we have also assessed the reasonableness of the data used and assumptions made with respect to the valuation of the financial assets.

These assessments were made in the context of our audit of the consolidated financial statements taken as a whole and contributed to the formation of our opinion expressed in the first part of this report.

#### 3. SPECIFIC VERIFICATION

As required by law, we have also verified the information relating to the Group, given in the management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

Paris La Défense and Neuilly-sur-Seine, February 11, 2009

The Statutory Auditors

**KPMG Audit** Department of KPMG SA Deloitte & Associés

Michel Piette Amadou Raimi Tristan Guerlain Jean-Luc Decornoy

# 20.3

#### Fees paid by the Group to statutory auditors

The following table sets forth the fees related to the 2008 financial year for EDF and its fully consolidated subsidiaries for services by its statutory auditors and their respective affiliates:

	Delo	oitte	KPM	KPMG		
(In thousands of euros)	Amount (taxes excluded)	%	Amount (taxes excluded)	%		
Audit:						
Statutory audit, certification, review of company and consolidated accounts						
• Issuer	3,494	33.8	3,257	32.8		
• Fully consolidated subsidiaries	4,537	44.0	3,937	39.6		
Other tasks and services directly connected to the statutory auditor's mission						
• Issuer	706	6.8	2,707	27.2		
Fully integrated subsidiaries	973	9.4	26	0.3		
Sub-total	9,710	94.0	9,927	99.9		
Other services provided by the auditors' networks to fully integrated subsidiaries:						
Legal, tax, social	324	3.2	4	0.0		
Other						
(specify if >10% of auditor's fees)	291	2.8	6	0.1		
Sub-total	615	6.0	10	0.1		
Total	10,325	100	9,937	100		

All of EDF's statutory auditors were renewed for 6 years from the 2005 financial year.

The fees were approved for each auditor after the process of necessary discussions and deliberations.

In 2008, KPMG network's fees include the auditor's mission services carried out in relation with acquisition of entities.

#### The information given for the 2007 financial year:

	Del	oitte	KPMG		
(In thousands of euros)	Amount (taxes excluded)	%	Amount (taxes excluded)	%	
Audit:					
Statutory audit, certification, review of company and consolidated accounts					
• Issuer	4,388	43.7	3,902	56.2	
Fully consolidated subsidiaries	3,815	38.0	2,651	38.2	
Other tasks and services directly connected to the statutory auditor's mission					
• Issuer	318	3.1	254	3.7	
• Fully integrated subsidiaries	847	8.4	72	1.0	
<b>Sub-total</b>	9,368	93.2	6,879	99.1	
Other services provided by the auditors' networks to fully integrated subsidiaries:					
Legal, tax, social	343	3.4	53	0.8	
Other (specify if >10% of auditor's fees)	338	3.4	10	0.1	
Sub-total Sub-total	681	6.8	63	0.9	
Total	10,049	100	6,942	100	

# 20.4

#### **Dividend policy**

#### 20.4.1 Dividends and interim dividends paid within the last three financial years

The amount of dividends and interim dividends paid within the last three financial years was as follows:

Financial year	Number of shares	Dividend per share	Total dividends paid in euros (after deduction of treasury shares)	Dividend Payment date
2005	1,822,171,090	€0.79	1,439,170,388.51	20 June 2006
2006	1,822,171,090	€1.16	2,113,624,504.40	4 June 2007
2007	1,822,171,090	€1.28	2,330,266,755.201	2 June 2008

In addition, during its meeting dated November 20, 2008, the EDF Board of Directors has decided, for the financial year 2008, to pay on December 17, 2008 an interim dividend of €0.64 per share, equivalent to a total amount of €1,164,067,897.60 (excluding repurchased shares), which has been paid out.

#### 20.4.2 Dividend distribution policy

The dividend distribution policy of EDF will continue to be determined by its Board of Directors. It will take into account its investment needs, the economic context and all other factors considered to be relevant.

At its meeting of February 11, 2009, the Board of Directors decided to propose to the Shareholders' Meeting of May 20, 2009, the distribution of a dividend amounting to €1.28 per share (of which, given the interim dividend, an amount of €0.64 per share remains due). If this proposal is approved, the dividend will be paid within 30 days following the shareholders' meeting

The Supervisory Board of the FCPE Actions EDF notified to EDF a draft resolution the purpose of which is to reduce the dividend amount (i.e., €0.64 per share against €1.28 per share). This draft resolution, reviewed by the Board of Directors of EDF during its April 1, 2009 meeting, will not be recommended by it.

#### 20.4.3 Prescription

Dividends that are not claimed within five years of the declared date of payment become time barred and are paid to the French State.

# 20.5

#### Legal and arbitration proceedings

In its everyday business, the Group is involved in a certain number of legal, arbitration and administrative proceedings.

The costs and expenses that may result from these proceedings are only provisioned if they are probable and if their amount can be quantified, or assessed within a reasonable range, in which case, the amount provisioned is determined on a case by case basis, based on the best possible estimate. The provisions made are based on an appraisal of the level of risk on a case by case basis and do not depend principally on the progress of the proceedings. However, events that occur during the proceedings may nonetheless lead to a reassessment of the risk.

Other than the proceedings described below, as well as the proceedings and/or investigations set forth in chapter 6 of the present Document de Référence, to the knowledge of the Company there is no other legal governmental or arbitration proceeding (including those pending or threatened), which has had in the last 12 months or may have material effects on the Company and/or the Group's financial condition or profits.

#### <sup>1</sup> €1, 056,809,460.08 of which paid on November 30, 2007 as an interim dividend.

#### 20.5.1 Legal proceedings concerning EDF

#### FRENCH STATE AID

Through a letter dated October 16, 2002, the European Commission initiated proceedings against France, claiming that State aid had been granted to EDF when its balance sheet was restructured on January 1, 1997. By a decision dated December 16, 2003, the European Commission set the amount of aid to be repaid at €889 million (principal). On February 11, 2004, the French State issued a collection note for €1,224 million, comprised of the principal amount of the aid to be repaid, plus interest, which was paid by EDF. On April 27, 2004, EDF filed an appeal with the European Court of First Instance to have the decision of the European Commission reversed and the French State filed, on November 14, 2004, a brief in support of EDF's appeal. A hearing took place before the European Court of First Instance on November 25, 2008, and the court's ruling may be issued during the second half of 2009.

#### Financial Information on Assets, the Financial Statements and Results of the Company

#### **ASBESTOS**

EDF has used products containing asbestos in the past. As such, certain employees, namely some working on fossil-fired power plant maintenance, may have been exposed before replacement or protection measures were implemented starting at the end of the 1970's.

In France, EDF was the subject of 487 proceedings, between 1997 and the end of December 2008, which alleged gross negligence in connection with the asbestos exposure of its employees in their working environment. If gross negligence is found, it may lead to the payment of additional compensation by the employer to victims or their assignees.

Since June 2004, EDF has decided not to appeal, in cases filed by agents, the rulings made by Social Security Case Panels (Tribunaux des Affaires de Sécurité Sociales, "TASS") which recognized the employer's gross negligence

As of the end of 2008, the total amount of EDF's cumulated final condemnations in judicial actions recognizing EGN attained approximately 18.2 mil-

As of December 31, 2008, an amount of €30 million is provisioned in EDF's financial statements with respect to the legal proceedings relating to the compensation of victims of asbestos.

#### **DIRECT ENERGIE**

On February 22, 2007, Direct Energie filed a complaint and an application for interim measures with France's Competition Council (Conseil de la Concurrence), claiming that EDF had used several practices allegedly constituting abuse of a dominant market position. The Council had firstly passed injunctions by a decision of June 28, 2007, although leaving EDF the possibility of undertaking commitments in response to its competition concerns. In a ruling issued on December 10, 2007, the Council accepted EDF's proposed commitments, which are now binding, to tender a significant volume of electricity (1,500 MW, i.e. approximately 10 TW per year for periods of up to 15 years) to alternative suppliers at prices enabling them to compete effectively with EDF's offers on the deregulated mass market.

Direct Energie lodged an appeal against the Council's decision with the Paris Appeal Court, and also brought proceedings before the Competition Council for alleged non-compliance with one of the injunctions included in its decision of June 28, 2007.

On August 5, 2008, Direct Energie dropped its action with the Paris Appeal Court as well as its action before the Competition Council.

The Competition Council formally acknowledged the withdrawal by Direct Energie in a statement of September 2, 2008, and the Paris Appeal Court formally recognised the withdrawal and the termination of the proceeding in a ruling of October 29, 2008.

#### **KALIBRAXE**

On January 22, 2007 KalibraXE submitted a complaint concerning alleged anti-competition practices committed by EDF to the Competition Council. The application for a remedy was accompanied by a request for conservatory

On the merits, KalibraXE maintained that the practices of EDF had notably, as their purpose and effect, "purely and simply to eliminate KalibraXE and, more generally, any new competitor on the market" and "prevent final consumers from freely choosing a supplier or buying from several suppliers". Considering, in addition, that, on the one hand, these practices denied KalibraXE "not only the opportunity to enter into new contracts but also to continue its contractual relations with existing customers since it could not generate a profit on its investments" and, on the other hand, constituted an attack on the interests of consumers, the industry and the wider economy, KalibraXE requested conservatory measures, in particular. the suspension of exclusivity clauses in EDF contracts.

On April 25, 2007 the Competition Council considered the case was admissible on its merits but rejected the conservatory measures sought by KalibraXE.

Nonetheless, as a conservatory measure, the Council did instruct EDF to modify its general conditions of sale and inform those customers who had exercised their rights of eligibility that no penalty would be incurred on the normal expiry date of their supply contracts, and to submit to the Council a copy of the amended general conditions of sale. KalibraXE appealed this decision; on June 26, 2007 the Court of Appeal of Paris rejected the

The inquiry of the Competition Authority ("Autorité de la Concurrence") (which replaced the Competition Council in accordance with order n°2008-1161 of November 13, 2008) is in progress.

#### **SOLAIRE DIRECT**

On May 19, 2008, Solaire Direct filed a complaint and an application for protective measures with France's Competition Council (Conseil de la Concurrence), alleging that "the EDF group" had made improper use of its dominant position on the various electricity markets to penetrate the emerging global services market for shared photovoltaic electricity generation via its subsidiary EDF Energies Nouvelles Réparties ("EDF ENR"), thereby hindering the arrival and development of new entrants on that market.

The Council met on November 26, 2008 to examine whether the substance of the complaint and the application for protective measures were admissible. EDF proposed commitments to address concerns over competition expressed by the Council. These commitments were posted on the Council's website as part of the "market test" procedure in order to allow the firms concerned to state their opinion.

During its session of February 24, 2009, the Competition Council decided to dismiss the commitments proposal, pass protective measures relating to the methods of marketing of global photovoltaic energy services by EDF Energies Nouvelles Réparties, and issue a ruling concerning the submission of Solaire Direct.

At the present stage of the investigation, the Competition Authority considers that the communication methods used by EDF create a confusion between, on the one hand, EDF's role as electricity supplier subject to the regulated tariffs, and on the other hand, the competitive activities of its subsidiary.

In its decision 09-MC-01 of April 8, 2009 the Competition Authority (which replaced the Competition Council in accordance with the order n°2008-1161 of November 13, 2008) instructs EDF to:

- Remove from all communication supports of the Bleu Ciel d'EDF brand (Bleu ciel letter, EDF's electricity supply invoice, publicity, etc.) any reference to EDF ENR's activities on the solar photovoltaic line of business;
- Prevent any agents reachable on the 3929 number from making any reference to the services offered by EDF ENR;
- Terminate any communication to EDF ENR of any information obtained through the 3929 number. This order concerns not only any appointments but also any transfer of information on people interested by the generation of photovoltaic energy;

Refrain from providing EDF ENR with information to which EDF has access due to its activities as an electricity supplier subject to the regulated tariffs.

EDF will have one month to comply with these requirements.

If the Competition Authority concluded at the end of the investigation (which is expected to last 12 to 18 months) that EDF was using anti-competitive practices, it could notably impose a financial penalty in application of the provisions of article L.464-2 of the French commercial code. Such potential penalty must be proportional to the gravity of the charges, the scale of the prejudice caused to the economy and the company's position, with a maximum potential amount equal to 10% of the worldwide sales (excluding taxes) of the company concerned.

#### **EPR**

In relation to EPR's development works, several actions were initiated by different associations before the Caen Administrative Court:

- a motion for summary judgment (recours en référé) suspending works in progress, filed on October 11, 2006 against the building permit. The hearing took place in front of the Caen Administrative Court on October 24, 2006 and the motion was rejected on October 26, 2006 for lack of
- two actions for cancellation filed on August 23, 2006 and October 11, 2006 against the building permit granted by the Préfet and two actions for cancellation filed on September 11, 2006 against the public seaborne domain works permit and the permit concerning other facilities and works, granted by the *Préfet*. These various actions were rejected by the Caen Administrative Court on March 15, 2007.

Appeals for annulment of the decree authorizing creation were submitted by three associations to the French Council of State on June 5, 2007. The ruling of the French Council of State is expected in May 2009.

#### LABOR LITIGATIONS

EDF is party to a number of labor lawsuits with employees regarding the calculation and implementation of rest periods. EDF estimates that none of these lawsuits, individually, is likely to have a significant impact on its profits and its financial situation. However, because they are likely to involve a large number of EDF's employees in France, these lawsuits could present a systemic risk which may have a material negative effect on the Group's financial results.

The Group is also a party to other litigations with social bodies. The main one is between EDF and the "URSSAF" in Toulouse relating to the inclusion of certain bonuses, indemnifications and other benefits in kind in the tax base. As of December 31, 2008, an amount of €247 million was provisioned in EDF's consolidated financial statements with respect to litigation with social authorities.

#### **ENVIRONMENTAL LAWSUITS**

Due to its industrial business, the Group is party to various environmental lawsuits, in particular, regarding ground decontamination. As of the date of the filing of this Document de Référence, the Group believes that none of these lawsuits, individually, is likely, in the event of an unfavorable outcome, to have a material, negative effect on the Group's financial results.

#### **TAX LITIGATION**

During 2008, EDF was the subject of a tax audit regarding 2004, 2005 and 2006 financial years. At the end of the year, a proposal of correction was sent to EDF regarding 2004 and 2005 financial years, leading to a recall right of €219 million, including penalties for delay. EDF denies all motions for corrections notified. The tax audit will continue in 2009 and covers the 2006 fiscal year.

#### INITIATION OF PROCEEDINGS BY THE EUROPEAN COMMISSION AGAINST THE EDF GROUP CONCERNING LONG-TERM **ELECTRICITY SUPPLY CONTRACTS**

On December 23, 2008, EDF and Electricité de Strasbourg received a statement of objections from the European Commission's Directorate General for competition, relating to the long-term electricity supply contracts concluded in France with large industrial electricity consumers. The European Commission considers that "these contracts may prevent customers from switching to other providers, thereby reducing competition on the market, in particular when considering the exclusive nature and duration of the contracts and the share of the market that is tied by them. Under the same contracts, the resale of electricity appears to be restricted. These practices may constitute infringements of the EC Treaty rules on abuse of dominant market positions (Article 82). In particular, these practices may have made it difficult for suppliers to enter and expand in the French electricity markets and may have rendered the wholesale market for electricity less liauid".

This statement of objections is the first stage in an exchange of positions between EDF and the European Commission, and in no way prejudges the final decision to be made by the European Commission. EDF replied to the statement of objections from the Commission on March 9, 2009, and a hearing was held on April 2, 2009.

The potential sanctions must be proportional to the gravity of the charges, the scale of the prejudice caused to the economy and the company's position, with a maximum potential amount equal to 10% of the worldwide sales revenues (excluding taxes) of the concerned company.

#### ALCAN SAINT-JEAN-DE-MAURIENNE

On December 31, 1985, EDF, Pechiney (now ALCAN France) and Aluminium Péchiney signed an energy supply contract (2 TWh) intended primarily to supply the Péchiney primary aluminum plant at Saint Jean de Maurienne, according to the terms of which EDF undertook to supply quantities of electricity for a fixed price. The duration of the contract was modified by additional clauses; it expires on December 31, 2012 for the Saint-Jeande-Maurienne plant.

Following various letters from ALCAN France requesting an extension of the contract, on August 2, 2007, ALCAN France and Aluminium Péchiney served a writ on EDF to appear before the Paris Commercial Court on September 21, 2007, for a preliminary hearing of the proceedings.

At the hearing held on November 3, 2008, EDF and Alcan regularized the conclusions in response. Accordingly, the Court referred the case to the hearing on January 26, 2009, in which EDF filed new responses.

#### REE

In the early 1990s, EDF and Red Electrica de Espana (REE) entered into a basic contract regarding the making available by EDF to REE of energy generation at the point of interconnection between the French and Spanish electricity networks, and a peak contract allowing ad hoc suspension of deliveries. From the time they were signed until the end of 2005, the contracts benefited from priority access to the interconnection.

#### Financial Information on Assets, the Financial Statements and Results of the Company

In a judgment of June 7, 2005, the Court of Justice of the European Communities declared the priority access contrary to European law.

The Commission issued an injunction instructing national regulators to eliminate priority access rights to the interconnection and to put in place, for all transactions, a bidding scheme for acquisition of the rights; the French Electricity Regulation Committee (Commission de Régulation de l'Electricité or CRE) complied with the injunction on December 1, 2005.

EDF and REE, which then had to reach an understanding on the conditions for the extraction of energy and acquisition of the interconnection access rights so that REE could import energy to Spain, were unable to reach agreement for the first few months of 2006.

REE originated international arbitration proceedings against EDF and EDF Trading, notified by the ICC (International Chamber of Commerce) on June 13, 2007, for compensation for the alleged damages. EDF also claimed it had suffered damages caused by REE during that time. The dispute is limited to deliveries during the period January - May 2006.

The deed of mission for the Court of Arbitration was signed on January 19, 2008. The Court issued a partial judgment on May 29, 2008, notably clearing EDF Trading from the rest of the proceedings.

#### **ARCELOR**

EDF and USINOR (now ARCELOR) entered into an electric energy sale master agreement on November 30, 1999. This master agreement provided that USINOR's sites, when they would become eligible, could replace their "Existing Agreements" by new "Sale Agreements" under the master agreement's conditions. This integration provision has been repeatedly applied when contractual conditions were fulfilled.

Following the group's restructuring, ARCELOR demanded on September 2006 to integrate Mittal Steel Gandrange and the Société Métallurgique de Révigny.

EDF has refused the automatic extension of the master agreement, indicating to ARCELOR that the extension could intervene only under price conditions to be defined between the parties. Despite of several meetings, it has been impossible to find an agreement and ARCELOR, Mittal Steel Gandrange and the Société Métallurgique de Révigny brought a proceeding against EDF on January 29, 2007 on the substance of the case and without delay before the Commercial Court of Paris.

The Commercial court of Paris pronounced its judgment on July 4, 2007. The latter has:

- ordered EDF to sign a supply agreement under the master agreement's conditions, with Mittal Steel Gandrange and the Société Métallurgique de Révigny, from the effective termination date of the agreements with their supplier;
- ordered EDF to pay damages to the three companies;
- ordered an expert's report to assess the damage sustained by the three companies:
- fixed the provision amount to deposit for this purpose by Arcelor France
- ordered EDF to pay to each of the three companies, €25,000 pursuant to article 700 of the French Civil procedure Code and ordered the provisional enforcement of the decision

EDF has decided to lodge an appeal against this decision and notified its statement of appeal on August 7, 2007.

On December 21, 2007 after ArcelorMittal France took over ArcelorMittal Wire France (AMWF), which itself controls ArcelorMittal Manois (AMM), ArcelorMittal France requested extension of its master agreement with EDF to include six new sites belonging to AMWF and AMM. Mediation procedures failed to settle the dispute, and ArcelorMittal France, AMWF and AMM served a summons dated March 5, 2008 on EDF to appear shortly before the Paris Commercial Court, where they are suing for inclusion of the sites concerned in the master agreement of November 30, 1999.

EDF has requested and obtained the stay of proceedings of this second Arcelor litigation, until the Court of Appeal of Paris renders its decision in the first Arcelor litigation.

The Commercial Court must rule on this second litigation, following the decision of the Court of Appeal issued on November 5, 2008.

#### SARL SECAM

By a decision dated December 10, 1996, upheld by the Court of Appeal of Paris, the Competition Council sentenced EDF for abuse of its dominant market position for having prevented the execution of electricity purchase agreements with independent producers between 1993 and 1995. Following this sentence, the National Association of Independent Producers and Heat Engineers (SNPIET), and approximately twenty producers have introduced an action in payment of damages before the Commercial court of Paris. The parties had signed on July 20, 2007 an agreement that had finally ended the dispute.

On April 4, 2007, EDF received from the SARL SECAM an administrative appeal prior to referral to the administrative judge. The SARL SECAM which was not party to the proceedings before the Competition Council and civil Courts is claiming €79 million.

By letter dated May 29, 2007, EDF rejected the preliminary request of this company. This resulted in the SARL SECAM lodging an action for compensation before the administrative Court of Paris, which decided that this case should be heard by the administrative Court of Chalons-en-Champagne. EDF filed a statement of defence during autumn 2007.

#### **FESSENHEIM**

A group of associations petitioned the French ministers in charge of nuclear safety (the ministers of Economy and Ecology) to order permanent shutdown and dismantling of the nuclear power plant at Fessenheim.

This request was based on article 34 of the "nuclear transparency and safety" 1 law, which allows the enactment of a decree adopted in the Council of State, after consultation with the Nuclear Safety Authority, to order the definitive shutdown and dismantling of a nuclear power plant that presents serious risks, when no other course of action is possible.

The Ministers rejected the petition, following which the associations lodged an appeal before the Strasbourg administrative court on December 10, 2008.

#### **EUROPEAN COMMISSION INVESTIGATIONS CONCERNING** AN INCREASE IN PRICES ON THE WHOLESALE ELECTRICITY **MARKET**

In accordance with a decision of February 18, 2009 based on article 20 of EC Regulation n°1/2003, the European Commission carried out in March 2009 surprise inspections at various EDF premises, in the context of investigations relating to the increase in prices on the wholesale electricity market in France

<sup>1</sup> Law no 2006-686 of June 13, 2006.

This inspection follows upon the conclusions of the Commission's inquiry into the energy sector published in January 2007.

It represents a preliminary step in the research concerning suspected anti-competition practices and does not prejudge the final conclusion of actual investigations.

#### 20.5.2 Legal proceedings concerning EDF's subsidiaries

#### RTE-EDF TRANSPORT

#### THE TRANSFER OF HIGH VOLTAGE LINES TO THE SNCF

Pursuant to the French Law of December 30, 1982 relating to inland transport, in accordance with the Law n°2004-803 of August 9, 2004, the high voltage lines transferred to the SNCF on January 1, 1983 (as equipment related to the public transmission network), must be transferred for consideration to RTE-EDF Transport within one year as from the creation of this company.

The SNCF and RTE (then a service of EDF) have considered a sale of this equipment since 2002 and have worked together in determining the value of this equipment on the basis of objective criteria. However, this valuation process was disrupted due to a dispute concerning the appraisal amount which is

As a consequence, RTE-EDF Transport requested on July 2007 from the Minister for Economy, Finance and Employment on one hand and the Minister for Ecology and Sustainable Development on the other hand, the implementation of an ad hoc commission provided by article 10 of the Law 2004-803 dated August 9, 2004 to solve the dispute between the parties.

The members of the Commission were appointed by a decision of the Minister Jean-Louis Borloo dated December 26, 2008 and published on January 18, 2009.

#### ANNUAL RENT CONTRACT CONCLUDED WITH THE SNCF

RTE-EDF Transport pays SNCF an annual rent of €3.1 million per year for the use of the facilities and installations of the high voltage electricity transmission network that was transferred to SNCF by the French Law of December 30, 1982. The amount of this rent has been determined by RTE in accordance with the principles used to remunerate its own assets, based on net book value, in the framework of public transmission network tariff. The payment of this rent of €3.1 million follows the termination by RTE in 2001 of the contract entered into with SNCF on December 22, 1999.

By way of an administrative order claim on February 22, 2002, SNCF initiated a procedure against RTE-EDF Transport before the Administrative Court (Tribunal Administratif) of Paris contesting the new amount of the annual rent paid to SNCF by RTE-EDF Transport and claiming the difference with the

Following the referral to the Administrative Court of Paris, the investigation which had been closed in a first instance, has been opened again. On August 29, 2008 the court ordered RTE-EDF Transport to pay the SNCF the differential from the original rent, plus interest at the legal rate. RTE-EDF Transport appealed this decision before the Paris administrative appeal court, also applying for application of the decision to be suspended, which was not an automatic consequence of the appeal.

On November 4, 2008, the SNCF served an order on RTE-EDF Transport by bailiff to pay the sum in question within 8 days. The Supervisory Board of RTE-EDF Transport decided to pay the SNCF the indemnity of €167,877,170.75 ordered by the court, without withdrawing its application for suspension of application of the administrative court's decision, or the appeal against that decision.

#### **TAX LITIGATION**

During 2008, RTE-EDF Transport was the subject of a tax audit regarding 2005, 2006 and 2007 financial years. At the end of the year, a proposal  $\,$ of correction was sent to RTE-EDF Transport, leading to recall rights of €24 million, including penalties for delay. RTE-EDF Transport denies all motions for corrections notified. The tax audit will continue in 2009 and covers 2006 and 2007 financial years.

#### **EDEV**

EDEV's tax audit carried out in 2005 regarding 2002 and 2003 financial years led to an assessment of €14.5 million in overdue corporate taxes. Since the disagreement with the tax authorities concerning the proposed adjustments persists, an application originating proceedings was submitted to the Paris Administrative Court on April 13, 2007.

#### **EDISON**

#### **ACTION INITIATED BY ACEA SPA CONCERNING EDISON'S SHAREHOLDING IN EDIPOWER**

On May 2006, ACEA SpA ("ACEA"), Rome's municipal utility, addressed a complaint to the Italian government and to Italian regulation (AEEG) and competition (AGCM) authorities, alleging that the joint takeover of Edison by EDF and A2A S.A. (formerly AEM S.p.A) had exceeded the upper limit of 30% of the share capital of Edipower held by public corporations (that limit was defined by a decree issued by the Italian Prime Minister, dated November 8, 2000, which defined the rules applicable to the privatization of the companies (called Gencos) then held by Enel SpA).

On July 7, 2006, the AGCM rendered an opinion ("segnalazione") supporting ACEA's position and officially requiring from the Italian government and parliament that measures be taken in order to comply with the provisions of the November 8, 2000 decree.

On August 2006, ACEA initiated an action against EDF, IEB and WGRMH Holding 4 (along with Edison, A2A S.A. (formerly AEM S.p.A), Delmi, Edipower, AEM Turin, Atel and TdE) before the civil court of Rome.

According to ACEA, the fact that the 30% threshold was exceeded constitutes a violation of the applicable laws and could have a negative impact on the competition on the energy market and on consumers' interests.

Therefore, ACEA has required the court to:

- acknowledge EDF and A2A S.A.'s (formerly AEM S.p.A) unfair behavior;
- force EDF and A2A S.A. (formerly AEM S.p.A) to sell their stakes in order to remain within the 30% limit and prohibit them to take and from taking and using energy for the amount above 30%;
- indemnify ACEA's prejudice, the amount of which is still under evaluation and to be determined under a separate proceeding.

ACEA has also indicated that it would require the court to take conservatory measures in order to guarantee its interests while waiting for the court's ruling on the merits.

#### Financial Information on Assets, the Financial Statements and Results of the Company

Since January 2007, Endesa Italia is also a party to the proceedings against EDF and AEM. The judge has rejected the addition to the file of a note from ACEA (new evidence) which assessed the damage sustained to

The next hearing relating to the substance of the case and the evidence used by ACEA to assess its damage was to take place on March 19, 2009; the hearing was postponed to January 21, 2010. As EDF and its subsidiaries have refused the inter partes proceeding on ACEA's demand of damage assessment, a potential decision of the Italian judge in favor of this assessment should not be binding for EDF.

#### **ACTION INITIATED BY C. TASSARA CONCERNING ITALENERGIA BIS' WARRANTS**

Italenergia Bis (IEBIS) is an Italian holding company which held, in 2002, 63% of the share capital of Edison, another Italian company. At that time, IEBIS shareholders were Electricité de France (EDF), Carlo Tassara, Fiat and three Italian banks.

In September 2002, in order to be able to acquire the control of IEBIS and consequently of Edison, EDF entered into a put and call options agreement with each one of IEBIS' shareholders, under which it would have the right (and eventually the obligation) to purchase, in 2005, all of their shareholdings in IEBIS. Such Put and Call agreements, except for the one entered into with C. Tassara, concerned IEBIS' shares as well as IEBIS' warrant held by each shareholder. The agreement entered into with C. Tassara was expressly limited, at his demand, to his IEBIS shares and which represent 20% of the company's share capital.

Several discussions and letter exchanges between EDF and Carlo Tassara followed (in November and December 2002) aiming to amend that Put and Call agreement so that it would include C. Tassara's IESBIS' warrants, in exchange of a preemptive right granted over his shareholding in Edison. However, the parties were unable to reach an agreement and no changes were made to the September 16, 2002 agreement which remained limited to IEBIS' shares.

On April 20, 2005, C. Tassara and the other IEBIS shareholders exercised their put options on IEBIS' shares and the transfer of the shares took place on July 26, 2005.

On April 14, 2006, C. Tassara initiated an action before the civil court of Milan against EDF, IEBIS, IEBIS' directors and Transalpina di Energia (TdE) to obtain that EDF complies with its supposed commitment to buy his IEB warrants for an amount of €20.4 million.

In addition to its main claim, C. Tassara's subsidiary claims concern the sale by IEBIS to TdE of its controlling share stake in Edison, which Mr. Tassara considers to be contrary to IEBIS' company interest and he consequently requires that the court avoids such sale and awards damages for an amount of approximately €122 million.

The defendants all filed their final pleadings on December 2006. Among others, EDF contested the competence of the Milan civil court, since the Put and Call agreement signed in September 2002 with C. Tassara included a provision stating that all disputes would be ruled by an arbitration court in Geneva. In parallel, EDF filed an arbitration claim before the Geneva Chamber of Commerce and Industry on November 7, 2006.

On October 31, 2007, the Geneva arbitration tribunal issued its decision on the case, deciding in favor of EDF. It decided it was competent to decide on the warrants issue and that there had been no agreement between the Parties as to the repurchase by EDF of the IEB warrants held by Tassara.

A request for acknowledgment and enforcement (exequatur) of the arbitral decision was made in Italy by EDF on November 7, 2007 before the Brescia court of appeal. The same day, during a hearing before the Milan court, EDF presented the arbitral decision and asked the tribunal to suspend the procedure until the Brescia court of appeal ruled on the exequatur request.

On November 19, 2007, the president of the Brescia court of appeal issued an exequatur decision; the arbitral decision is therefore binding and may be executed in Italy.

On December 27, 2007, C. Tassara filed an appeal before the Swiss federal tribunal against the arbitration tribunal's decision. By a decision dated March 6, 2008 the Swiss federal tribunal dismissed the appeal filed-by C. Tassara.

C. Tassara also filed before the Brescia court of appeal a motion to annul the exeguatur decision.

On February 13, 2008, the Milan tribunal issued its decision: it held that it was competent to rule on the warrants issue but rejected all of C. Tassara's demands (the main and the subsidiary demands).

Finally, by a decision notified to EDF on February 4, 2009, the Court of Appeal of Brescia rejected C. Tassara's opposition to the exequatur decision of the arbitral decision in EDF's favour, given by the president of this Court on November 19, 2007. The Court also sentenced C. Tassara to reimburse EDF's legal costs for a sum of €106,193.25.

#### PROCEEDINGS CONCERNING THE SALE OF AUSIMONT

#### A. COMPLETION OF ARBITRATION

The arbitration proceedings initiated on May 19, 2005 against Edison by Solvay SA and Solvay Solexis SpA following several disputes between the parties with respect to the representations and warranties contained in the contract covering Edison's sale of its interest in Agorà SpA (parent company of Ausimont SpA) were closed on December 11, 2008 when Solvay SA and Solvay Soleno SpA and Edison reached a settlement.

#### **B. ENVIRONMENTAL DAMAGE**

The Public Prosecutor of Pescara opened a preliminary investigation into a suspected case of water pollution and ecological disaster affecting the river Aterno basin at Bussi sul Tirino, which for more than a century has been the site of an industrial complex belonging to Ausimont SpA that was sold to Solvay Solexis SpA in 2002.

A large quantity of industrial waste was found on a plot of land belonging to Edison adjacent to the plant, and an attachment order has been placed on that land. By order of October 4, 2007 the President of the Italian Council of Ministers appointed a special commissioner empowered to undertake urgent measures: identification, safety and rehabilitation measures for the land.

The Public Prosecutor of Pescara has closed the preliminary investigation and notified certain former directors and managers of Solvay Solexis and Edison that the case will go to court on charges of water poisoning, ecological disaster and fraud.

The commissioner has ordered Edison to prepare a characterization plan of the zone, take urgent measures to make it safe and present proposals for decontamination of the ground and ground water. Edison, which has never used this site for its business, has filed an appeal with the Regional administrative

#### PROCEEDING INITIATED BY THE HOLDERS OF THE SAVINGS SHARES AND UBS FOR DAMAGES CAUSED BY THE MERGER OF **EDISON INTO ITALENERGIA**

On August 9, 2002, the representative of holders of the savings shares challenged the resolution of Edison's extraordinary meeting of June 27, 2002, which decided on the merger of Edison into Italenergia. He requested that implementation of the resolution be suspended, the resolution be avoided and that Edison's responsibility be recognized for all damages caused by the merger to holders of the savings shares.

On October 9, 2002, the Court of Milan rejected the request to suspend the merger.

On April 29, 2003, UBS voluntarily joined the action and asked that Edison be ordered to pay damages for the loss in value of Edison shares and the fixing of a share exchange ratio penalizing the shareholders of Edison and therefore those of UBS.

The Court-appointed expert has filed his report in which he found that while the valuation criteria used were indeed adequate, there were some flaws in the valuation process (lack of control methods) and instances of incorrect application of the criteria that may have caused damage for the savings shareholders.

The Court of Milan, by a ruling dated July 16, 2008, ordered Edison to pay €22.5 million, plus interest and costs. Edison is currently studying the most appropriate actions to take following this ruling.

#### **CLAIMS BROUGHT BY EMPLOYEES CONCERNING EXPOSURE TO ASBESTOS OR OTHER HARMFUL CHEMICAL SUBSTANCES**

In recent years, Edison has had to face a significant increase in the number of claims for damages arising from the death or illness of employees that were allegedly caused by exposure to several forms of asbestos at factories owned by Montedison (having become Edison), or judicial cases taken over by Edison as a result of corporate acquisitions. In addition to provisions established specifically for certain pending disputes currently underway, Edison has decided to set aside a provision of an amount estimated on the basis of the average between the value of the claims for damages that it has received and paid in recent years for similar events and the claims that it has received so far as a result of judicial and extrajudicial proceedings.

Furthermore, Edison is involved in several criminal proceedings filed by former employees of companies belonging to the Edison group or their legal successors, arising from exposure to harmful chemical substances emitted by Montedison's facilities (since transferred to Enimont).

#### LITIGATION CONCERNING ENVIRONMENTAL MATTERS

Edison is involved in several criminal proceedings currently underway concerning damages caused by the operation of Montedison's chemical factories (petrochemical facilities at Porto Marghera, Brindisi, Mantua, Priolo (Syracuse) and Cesano Maderno) belonging to the group prior to their transfer to Enimont. These criminal proceedings also include actions brought by third parties concerning physical injuries linked to the alleged environmental damages.

#### **BE ZRT**

In November 2005, the European Commission decided to start a formal investigation into long-term electricity purchase agreements (PPAs) under article 88, paragraph 2 of the EC Treaty. BE ZRt initiated appeal proceedings against this decision on March 3, 2006. The written procedure came to an end on June 9, 2008 and a court hearing is expected in early 2009 at a date to be set by the Luxembourg court of first instance.

On June 4, 2008, without waiting for the ruling by the Court of First Instance on the appeal, the European Commission issued a decision requiring the Hungarian government to terminate the existing PPAs by the end of 2008 and the electricity producers to refund by April 2009 any amounts of State aid received since May 1, 2004, the date at which Hungary ioined the EU.

BE ZRt decided to appeal this Commission decision by supporting the appeals lodged before the Court of First Instance by other Hungarian producers.

However, the appeal proceedings against the decision to start a formal investigation, initiated by BE ZRt before the Luxembourg court of first instance on March 3, 2006, are still ongoing.

The Hungarian government has not challenged the decision of the European Commission. In contrast, the Hungarian legislature complied by adopting, on November 10, 2008, an Act (entered into force in November 16, 2008) terminating on December 31, 2008, the PPA that would not have been terminated at that date by a mutual agreement of the parties.

BE ZRt's PPAs were thus terminated at December 31, 2008. In order to stay in business, BE ZRt has negotiated an 8-year sales contract with MVM (the state-owned sole Hungarian buyer) for half of its electricity output, and benefited from the "cogen" decree for the sale of the other half of its output.

EDF International, meanwhile, notified the Hungarian government by letter dated September 26, 2008 that it was entering into a pre-arbitration phase under the Energy Charter Treaty and the Franco-Hungarian treaty on protection of investments. This action could lead to international arbitration proceedings against the Hungarian government in early 2009 by EDF International, whose investment in BE ZRt was undertaken after the company's privatization, on specific terms which are now in question.

#### **EnBW**

EnBW has plants in Karlsruhe and Ansbach owned respectively by EnBW Grundstücksverwaltung Rheinhafen Gmbh, and Thermische Abfallentsorgung Ansbach GmbH (TAE).

The Karlsruhe plant is now closed and the Ansbach plant was never finished.

In 2004 TAE declared that it was terminating the service and construction contract for the Ansbach plant signed with Thermoselect SA. As a result Thermoselect SA sued TAE for damages amounting to some €9 million, subsequently amending its claim in December 2006 to sue TAE for €48 million. The Ansbach regional court rejected Thermoselect's action and ordered Thermoselect to pay €29 million of damages to TAE, and Thermoselect appealed this decision in May 2007.

Also in 2004, EnBW terminated its service and construction contract for the Karlsruhe plant signed with Thermoselect SA, which initiated action against EnBW before the Karlsruhe regional court.

In 2006, Thermoselect SA amended its action and claimed some €580 million in damages against EnBW. The Karlsruhe regional court dismissed its claim in June 2006. Thermoselect SA began action before Germany's Supreme Federal Court in December 2007.

<sup>&</sup>lt;sup>1</sup> Decree setting out terms including the tariff for renewable energies and cogeneration. adopted by the Hungarian government on November 28, 2008 ("Cogen decree").

#### Financial Information on Assets, the Financial Statements and Results of the Company

#### Significant change in the company's financial or trading position 20.6

The significant events that took place between the end of the 2008 financial year and the date of filing of the present Document de Référence are mentioned in note 42 to the consolidated financial statements for the fiscal year ended December 31, 2008 as to events that took place before the

financial statements were drawn up by the Board of Directors on February 11, 2009, and in section 9.13 ("Subsequent events") of this Document de Référence as to events that took place afterwards.

## **Additional information**

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# 21.1

#### General information regarding the Company's share capital

#### 21.1.1 Issued share capital amount at the time of the filing of the present Document de Référence

As of the date of the filing of this Document de Référence, the Company's share capital breaks down as follows:

Number of issued shares:	1,822,171,090
Nominal value of the issued shares:	€ 0.50 per share
Legal status of the issued shares:	Common shares
Total amount of the share capital:	€ 911,085,545

All share capital issued by the Company has been paid up.

At the time of the filing of the present Document de Référence, the Company has not issued nor authorized any preference shares.

#### 21.1.2 Ownership of shares and control by the Company

#### SHARE REPURCHASE PROGRAM IN FORCE AS OF THE DATE OF THE FILING OF THIS DOCUMENT DE RÉFÉRENCE (PROGRAM AUTHORIZED BY THE ORDINARY SHAREHOLDERS' MEETING OF MAY 20, 2008).

The Shareholders' Meeting of May 20, 2008, after examination of the report from the Board of Directors and in accordance with the provisions of Article L. 225-209 et seg. of the French Commercial Code, authorized under its sixth resolution the implementation by the Board of Directors of a share repurchase program of up to a maximum of 10% of the Company's share capital. That resolution immediately terminated the authorization to repurchase Company shares granted by the seventh resolution of the Shareholders' Meeting of May 24, 2007, for the fraction which was not used.

The aims of the share repurchase program are as follows:

• to grant shares in connection with the conversion of securities giving access by any immediate or future means to the share capital of the Company as well as conduct any hedging transactions with respect to EDF's (or one

of its subsidiaries) obligations connected with such securities, in accordance with the conditions stipulated by market authorities and at such times that the Board of Directors or the person acting upon delegation of the Board shall determine:

- to maintain shares for future grants in exchange or as payment in the context of external growth operations;
- to ensure the liquidity of EDF's shares through an investment services provider under a liquidity agreement complying with the ethics charter recognized by the French financial market authority (AMF);
- to attribute shares to employees of the EDF group, and in particular, within the framework of any stock purchase or stock grant plans for the benefit of employees on the terms provided by law and, in particular, by Articles L. 225-197-1 et seq. of the French Commercial Code or Articles L. 3332-1 et seq. of the Labor Code, as well as performing any hedging operations related to such operations, on the terms provided by the French financial market authority (AMF) and at such time as determined by the Board of Directors or the person acting by delegation of the Board of Directors:
- to reduce the Company's share capital by cancellation of all or part of the shares purchased.

Purchases of the Company's shares may concern any number of shares

- the number of shares that the Company purchases during the duration of the repurchase program does not exceed 10% of the shares comprising the Company's share capital as of the date of the Shareholders' Meeting of May 20, 2008; and
- the number of shares that the Company holds at any time does not exceed 10% of the shares comprising the Company's share capital.

The acquisition or transfer of these shares may be carried out, on the terms and within the limits, including as to volumes and price, provided by the laws in effect on the date of the relevant operations, by any means, including on the market or by direct sales, including through acquisition or sale of blocks, by recourse to derivative financial instruments or to bonds or securities giving access to Company shares, or by implementing optional strategies, on the terms provided by the financial market authorities and at such time as determined by the Board of Directors or the person acting by delegation of the Board of Directors.

The portion of the repurchase program which may be performed through trading in blocks is unlimited. The maximum amount of funds for carrying out this share repurchase program is €2 billion.

#### Additional Information

Under this program, the repurchase price must not exceed €100 per share. The Board of Directors may, however, adjust the aforementioned purchase price in the case of incorporating bonuses, reserves or profits, giving rise either to an increase in the shares' par value or to the creation and free distribution of shares, and in the case of a stock split or grouping together of shares, or any other operation involving equity, in order to take into account the effect of these operations on the shares' value.

This authorization is granted for a maximum duration of 18 months as of the Ordinary Shareholders' Meeting which took place on May 20, 2008. This authorization may be used during public tender offers, within the limits set by applicable regulations.

The number of shares purchased by the Company for the purposes of holding them or using them as payment or exchanges in connection with a merger, spin-off or capital contribution operations cannot exceed 5% of its share

The Board of Directors will have all powers in order to implement the authorization, with the possibility of delegating its powers, for the purpose of:

- making any orders on the market or over-the-counter;
- allocating or reallocating the shares purchased for the various objectives pursued under the applicable legal and regulatory conditions;
- concluding any agreements in order, among other things, to keep share purchase and sale registers;
- making any declarations and carrying out any formalities with the French financial market authority (AMF) and with any other organization; and
- carrying out any other formalities and, generally speaking, doing all that is necessary and appropriate.

Each year, the Board of Directors must inform the shareholders' meeting of each of the operations performed pursuant to this authorization to perform operations involving the company's shares.

#### SUMMARY OF THE TRANSACTIONS EFFECTED BY THE COMPANY WITH RESPECT TO ITS SHARES AS PART OF THE PROGRAM **AUTHORIZED BY THE ORDINARY SHAREHOLDERS MEETING OF** MAY 20, 2008.

A liquidity agreement was entered into on May 24, 2006 with Crédit Agricole Cheuvreux for a period of one year, renewed by tacit agreement. The initial amount of €35,000,000 has been applied to the liquidity item in relation with the implementation of the liquidity agreement, as of its execution, in accordance with the Company's shares repurchase program.

Between January 1, 2008 and December 31, 2008, the Company repurchased, within the framework of the liquidity agreement, 4,773,403 of its own shares on the basis of an average amount of €54.80 per share and sold 4,432,163 shares on the basis of an average amount of €56.11 per share. By December 31, 2008, the Company held, within the framework of the liquidity agreement, 457,000 treasury shares, amounting to 0.03% of its share capital. Throughout 2008 financial year, the stand-by fee paid by EDF pursuant to the liquidity agreement amounted to €180,000.

As of January 1, 2009 and until February 28, 2009, the Company repurchased 691,927 of its own shares on the basis of an average amount per share of €37.09 and sold 418,927 shares on the basis of an amount per share of €37.11

The Company also held at December 31, 2008, 2,805,000 shares acquired on the market, for allocation to employees within the framework of the plan "ACT2007".

In addition, as of the date of filing of this Document de Référence, the Company holds 874.3 units in the "Energie Multi" compartment of the fund of the Company's mutual fund "EDF Actions", which correspond to 8,743 Company shares (approximately 0.00048% of the share capital as of the date of this Document de Référence). These shares are due to share purchase orders which were cancelled in the offering reserved to the EDF group's employees (as described in the prospectus which received the AMF visa number 05-743 on October 27, 2005). By the end of the five-year lock-up period, these 874.3 units will be sold, and the amount received will be paid to the French State.

#### RESOLUTION RELATING TO THE AUTHORIZATION GIVEN TO THE **BOARD OF DIRECTORS TO PERFORM OPERATIONS INVOLVING** THE COMPANY'S SHARES, SUBMITTED TO THE ORDINARY SHAREHOLDERS MEETING OF MAY 20, 2009

In its February 11, 2009 meeting, the Board of Directors decided to include in the Ordinary shareholders' meeting of May 20, 2009 agenda, the vote of share repurchase program, similar in certain points to the one authorized by the May 20, 2008 shareholders' meeting, notably for what concerns the goals of that program and the limited number of shares which can be repurchased. Unlike the share repurchase program in force, the new share repurchase program provides that the repurchase price will not exceed €90 per share, against €100 in the current repurchase program.

#### **21.1.3** Bonds

In accordance with Article L 228-40 of the French Commercial Code, only the Board of Directors can decide or authorize the issuance of bonds, except if the general shareholders' meeting decides to exercise this power.

On the basis of Article 46 paragraph 2 of the Law of August 9, 2004, the first paragraph of Article L 228-39 of the French Commercial Code which states that "the issuance of bonds by a "société par actions" which has not presented two balance sheets regularly approved by shareholders requires a prior audit of the Company's assets and liabilities as described by Articles L 225-8 and L 225-10 of the French Commercial Code" is not applicable to EDF since 2004.

On April 18, 1996 EDF implemented a program for the issuance of debt securities under the Euro Medium Term Notes ("EMTN") program. Since then the program has been renewed every year.

An update of the program for the issuance of debt securities for a maximum amount of €16,000,000,000 was implemented on May 16, 2008, by the Group.

On December 31, 2008, the outstanding amount of the debt of EDF in the form of bonds (borrowings issued as EMTNs and other debt securities) was €15,201,000,000.

#### 21.1.4 Other securities giving access to the share capital

At the time of the filing of the present Document de Référence, besides ordinary shares of the Company, there are no other securities giving access, directly or indirectly, to the share capital of EDF.

#### 21.1.5 Authorized but un-issued capital

The table below presents a summary of the delegations and authorizations into force on the date of filing of the present Document de Référence, granted to the Board of Directors by the ordinary and extraordinary shareholders' meeting of the Company held on May 24, 2007 to increase the share

Directors by	to the Board of the Extraordinary ders' Meeting	Maximum Nominal Amount of Capital Increase (in € millions)	Duration of Delegation <sup>(i)</sup>
increase with main	ority to the Board for a share capital senance of preferential maintenance cription rights of shareholders	45	26 months
	ority to the Board for a share capital aintenance of preferential of shareholders	<b>45</b> <sup>(2)</sup>	26 months
the number of shar	ority to the Board to increase es to be issued in the event icrease in the context of to Items 1 and 2	15% of the initial issuance <sup>(2)</sup>	26 months
the share capital th profits, share prem	ority to the Board to increase rough incorporation of reserves, ums or other amounts n would be admitted	1,000	26 months
the share capital in	ority to the Board to increase compensation for an nitiated by the Company	<b>45</b> <sup>(2)</sup>	26 months
the share capital as	ers to the Board to increase consideration for contributions e Company (Article L 225-147 mercial Code)	10% of the share capital of the company <sup>(2)</sup>	26 months
7. Delegation of power increase the share of participants in a	capital for the benefit	10	26 months

<sup>(1)</sup> Beginning from the date of the ordinary and extraordinary shareholders' meeting of May 24, 2007.

#### 21.1.6 Information about share capital of Group members, subject to conditional or unconditional agreements

Investment and divestment commitments on the shares of the subsidiaries are described in note 25.5 to the consolidated financial statements for the financial year ended December 31, 2008. Apart from the investment and divestment commitments and other commitments described in Chapter 6 of the present Document de Référence, EDF has not entered into any offer to sell or purchase whole or part of the share capital of the Company or one of its subsidiaries, as defined in article L. 233-1 of the French Commercial Code.

#### 21.1.7 Shareholder Agreements

At the time of the filing of the present Document de Référence, and to the Company's knowledge, no shareholder agreement has been concluded that concerns the Company's securities.

#### 21.1.8 Security interests in the Company's securities

To the Company's knowledge, none of the Company's ordinary shares is the object of any security interest.

#### 21.1.9 Evolution of the Company's share capital

In order to comply with the Law of August 9, 2004, EDF has become a "société anonyme" on November 20, 2004 and its share capital was fixed at €8,129,000,000, divided in 1,625,800,000 shares of a €5 nominal value each.

On August 31, 2005, the EDF general shareholders' meeting gave full authority to the Board of Directors to effect a capital reduction by the maximum amount of €7,316,100,000, by means of the reduction of the shares' nominal value of €5 to a minimum of €0.5. At its meeting of October 27, 2005, the Board of Directors has resolved to reduce the share capital by the amount

<sup>(2)</sup> Up to the upper limit set forth in Item 1, i.e., €45 million.

<sup>(3)</sup> As of the date of the ordinary and extraordinary shareholders' meeting of May 24, 2007.

#### Additional Information

of €7,316,100,000, by reducing the share nominal value by €4.5, from €5 to €0.5. The share capital was thus reduced to €812,900,000.

At its November 18, 2005 meeting, the Board of Directors, exercising the authority granted to it by the October 10, 2005 shareholders' meeting, has resolved to proceed with the Company's capital increase through the French retail public offering and the institutional placement, in the context of the initial public offering of the Group. The share capital was thus increased to €906,834,514.

On December 20, 2005 Calyon paid to EDF the price due on the exercise of 8,502,062 over-allotment options that EDF Board of Directors had decided to issue for the benefit of Calyon at its November 18, 2005 meeting. The share capital was thus increased to €911,085,545, divided into 1,822,171,090 ordinary shares.

# 21.2

#### Incorporation documents and articles of association

#### 21.2.1 Company's purpose

The Company's purpose, both in France and abroad, is to:

- secure generation, transmission, distribution, supply and trading of electrical energy and secure the import and export of this energy;
- carry out the public service missions assigned by laws and regulations, especially by the French Law of June 15, 1906 regarding energy distribution, the aforementioned French Laws of April 8, 1946 and February 10, 2000 and Article L 2224-31 of the French Code for Local Authorities, as well as by the concession agreements, and in particular, the missions regarding the development and operation of the public electricity networks, the energy supply to non-eligible customers, the supply of emergency energy to producers and customers to compensate unexpected power failures and the supply of energy to eligible customers who cannot find any other supplier, while contributing to the accomplishment of the goals defined by the multi-annual generation investments program implemented by the minister responsible for the energy sector;
- more generally, develop any industrial, commercial or service activity, including research and engineering activities in the energy field, for all custo-
- increase the value of all tangible and intangible assets it has or uses;
- create, acquire, rent out or lease management of all property, real estate and businesses, lease, set up and operate all establishments, businesses, plants and workshops relating to any of the aforementioned purposes;
- take, acquire, operate or sell all processes and patents concerning activities which relate to any of the aforementioned purposes;
- take part, directly or indirectly, in any operation connected to one of the aforementioned purposes, by creating new companies or undertakings, by contributing, subscribing or purchasing any securities, by taking part in investments or by merging, associating or any other manner whatsoever;
- more generally, engage in any industrial, commercial, financial, property or real estate operations directly or indirectly connected, in whole or in part, to one of the aforementioned purposes, to any similar or connected purpose or even to any purpose which may favor or develop the Company's business.

#### 21.2.2 Company's fiscal year

Each Company's fiscal year lasts 12 months: it starts on January 1 and terminates on December 31 of each year.

#### 21.2.3 Management

The Company is managed by a Board of Directors consisting of 18 members in accordance with the provisions of the French Law of July 26, 1983, as amended, relating to the democratization of the public sector, in particular, Article 6 thereof, and with the provisions of the French Statutory Decree of October 30, 1935, as amended, organizing the French State's financial control of companies having requested financial support from the French State.

Within this framework, as of the date of the filing of the present *Document* de Référence, the Board of Directors included six representatives of the French State, appointed by decree and six representatives of the employees elected in accordance with the provisions of section II of the aforementioned French Law of July 26, 1983.

The Board of Directors may include, at most, two members of the French Parliament or holders of a local electoral mandate selected for their knowledge of regional, departmental and local aspects of energy issues.

The Board must appoint a Secretary but is free to choose a person who is not a member of the Board.

The Chairman and Chief Executive Officer must communicate to every member of the Board all documents and information required for the fulfillment of their task.

The duration of the mandate of members of the Board of Directors is five years. In case of a vacancy for any reason whatsoever of the seat of a member of the Board of Directors, his/her replacement will only hold office for the remaining duration of the term until the renewal of the full Board of Directors.

The general shareholders' meeting sets the amount of the directors' fees, if any. Members of the Board of Directors who have not been elected at the general shareholders' meeting are not entitled to a financial remuneration.

Other costs paid by the members of the Board as a part of their mission will be reimbursed by the Company, provided that they present a justification.

Employees' representatives are entitled to a time credit corresponding to half of the legal working period.

Each member of the Board of Directors who has been appointed by the general shareholder's meeting must hold at least one nominative share of the Company's capital. The shareholder's meeting can also decide to dismiss

At the Chairman and Chief Executive Officer's request, the Board of Directors can, if it thinks that it is necessary and according to the meeting's agenda, invite Company members or even persons who are external to the Company to attend the Board's meeting without being able to vote.

The Secretary of the Works Committee or any equivalent institution attends the Board of Directors' meetings but without the right to vote.

Any person attending one of the Board of Directors' meetings is subject to the same confidentiality obligations as the members of the Board.

In accordance with the aforementioned Law of 1983, the Chairman of the Board of Directors is appointed by decree, from among the directors, following a proposal made by the Board of Directors. The duration of the Chairman's duties may not exceed that of his term of office as a director. His mandate may be renewed under the same conditions as those of his appointment. The Chairman mandate may be revoked by decree. Since the shareholders' meeting of February 14, 2006, which decided to modify EDF's by-laws, the Chairman of the Board of Directors may not be older than 68 years old; otherwise he will automatically be deemed to have resigned.

The management of the Company is assumed by the Chairman of the Board of Directors, who bears the title "Chairman and Chief Executive Officer". He must therefore comply with all the laws and regulations applicable to Chief Executive Officer

In accordance with Article L 228-40 of the French Commercial Code, the Board of Directors may delegate the necessary authority to the Chief Executive Officer or, if he agrees, to one or several Chief Officers, in order to carry out, within one year, the issuance of bonds and settle its terms and conditions. The Board of Directors will also settle, in the same deliberation, the terms and conditions under which the Chief Executive Officer or his deputies will account to the Board for the exercise of these powers.

#### 21.2.4 Rights attached to shares

Each share entitles its holder to a share of the Company's profits and assets which is proportional to the part of the Share capital that it represents.

Moreover, each share confers a voting right and the right to be represented at the general shareholder's meetings in accordance with legislative, regulatory and statutory conditions and restrictions.

On the date of the present Document de Référence, EDF has issued only one class of shares.

The ownership of a share automatically entails acceptance of the articles of association and of the decisions of the general shareholders' meeting.

Shareholders shall only bear losses up to the amount of their contributions.

The heirs, creditors, assigns and other representatives of a shareholder cannot request the affixture of seals to the assets and securities of the Company, nor may they demand the partition or sale by auction of property, nor interfere in the Company's management; in order to exercise their rights they must refer to the Company's inventory and to the decisions of the general shareholders' meeting.

Whenever it will be necessary to hold several shares in order to be entitled to exercise a right, in the event of exchange, consolidation and allocation of shares, or due to a capital increase or decrease, a merger or any other corporate operation, the holders of isolated shares or whose number of shares is not enough cannot exercise their right unless they arrange a consolidation or the sale or the purchase of the required number of shares.

The shareholder can decide whether his shares will be in registered or in bearer form, subject to compliance with laws and regulations.

The shares can be registered under the name of an intermediary, subject to the conditions of Article L 228-1 et seq. of the French Commercial Code. The intermediary must state his status as an intermediary who is holding shares for someone else, according to laws and regulations. These provisions are also applicable to other securities issued by the Company.

In accordance with the present laws and regulations, the Company is entitled to claim from the central depositary, at any time and provided that it grants a financial compensation, that he reveals the name or the corporate name, the nationality, the date of birth or incorporation and the address of the holders of shares in bearer form which may, at the present time or in the future, award a voting right in its own general shareholders' meetings. The Company is also entitled to know the number of shares held by each of these shareholders and any restrictions these shares can be subject to. In light of the list provided by the above-mentioned entity, the company can ask the persons mentioned on the list and who can be considered by the company as holding personal account the above-mentioned information relating to the shareholders.

If shares in registered form are concerned, giving immediate or delayed access to the share capital, the intermediary registered pursuant to article L. 228-1 mentioned above must reveal the identity of the share owners as soon as the company or its mandatory so requires within 10 business days from the request, and the request can be made at any time.

#### 21.2.5 Sale and transfer of shares

Shares are freely negotiable subject to legislative and statutory provisions. They shall be subject to registration to an account and shall be moved by transfer from account to account. These conditions shall also apply to other securities of any nature issued by the Company.

Apart from the legal obligation to inform the company when certain thresholds of share capital or voting rights are held, any person who, directly or indirectly, acting alone or in concert with others, acquires ownership or control of shares representing 0.5% of the Company's share capital and/or voting rights will be required to notify the Company, by a registered letter, the number of shares and voting rights it holds within five trading days of the book entry of the shares.

The intermediary registered as shareholder must make the above-mentioned declarations, independently from the obligations of shareowners.

This declaration must be renewed under the above-mentioned conditions each time a new threshold of 0.5% is reached or is crossed, whether on the upswing or in the downswing, and whatever the reason, even above the 5% threshold mentioned in article L. 233-7 of the French Commercial Code.

If a person does not comply with the above-mentioned provisions, the shareholder(s) concerned will be stripped of voting rights corresponding to the shares exceeding the thresholds, under the conditions provided by law.

#### 21.2.6 Shareholders' meetings

#### 21.2.6.1 MEETINGS, ADMISSION CONDITIONS, VOTING RIGHTS

Shareholders' meetings are convened by the Board of Directors or, by default, by the auditors or by any authorized person. They shall be held at the registered head office or any other place indicated in the notice. They may take place by video conference or by means of telecommunication allowing for the identification of the shareholders, the nature and conditions of which are determined by articles R. 225-97 to R. 225-99 of the French Commercial Code. In such cases, shareholders attending the meeting by such means are deemed to be present for the calculation of the quorum and majority in accordance with legal requirements.

#### Additional Information

Shareholders' meetings are comprised of all of the shareholders whose shares are fully paid up and have been registered to an account in their name at least five days before the date of the meeting, in accordance with the following conditions:

- holders of bearer shares or shares in their name registered to an account not held by the Company must, in order to be entitled to attend, to vote by correspondence or to be represented at shareholders' meetings, present, at the place specified in the notice of the meeting, a certificate issued by the intermediary attesting the non-availability of the shares until the date of the shareholders' meeting, at least five days before the date of the meeting; and
- the owners of shares in their name registered to an account held by the Company must, in order to be entitled to attend, to vote by correspondence or to be represented at shareholders' meetings, have their shares registered to their account held by the Company at least five days before the date of the shareholders' meeting.

The Board of Directors may, however, shorten or cancel these five-day time restrictions.

Access to the shareholders' meeting is open to its members upon simple production of documentation confirming their status and identity. The Board of Directors may, should it see fit, produce and distribute to shareholders personal admission cards and require these cards to be presented.

Any shareholder may be represented by his or her spouse or another shareholder at a shareholders' meeting. The owners of shares legitimately registered in the name of an intermediary in accordance with the conditions provided for in Article L. 228-1 of the French Commercial Code may be represented in accordance with the conditions provided for in such Article by a registered intermediary.

A shareholder may also vote by correspondence after having had his or her status as a shareholder attested to at least five days before the shareholders' meeting, by the depositary or by registered certificate(s). As from the date of this attestation, the shareholder will not be able to choose any other method of participation at the shareholders' meeting. The Company must receive the ballot at least three days before the meeting.

Powers of attorney, correspondence voting forms and attestations of immobilization of shares may be prepared in electronic form and duly signed in accordance with the legislative and regulatory conditions applicable in France.

#### 21.2.6.2 DOUBLE VOTING RIGHTS

None.

#### 21.2.6.3 LIMITATION OF VOTING RIGHTS

None.

#### 21.2.7 Statutory device which would delay a takeover of the Company

According to EDF's by-laws, modifications in its share capital cannot have as a consequence the reduction of the French State's shareholding below the legal threshold of 70%. Apart from this, no other provision in the constituting or organizational documents prevents or delays a takeover of the company by a third party.

#### 21.2.8 Obligations relating to changes in share capital

The share capital can be increased, decreased or redeemed under the conditions defined by the law.

#### **Material contracts**

Apart from the agreement described in chapter 6 of this Document de Référence, and those described hereinafter, EDF has not entered into any major contract except for those of its daily business within the last two years preceding this Document de Référence:

- public service contract described in section 6.4.3.4 "Public service in France";
- the contracts entered into with A2A S.A. (formerly AEM S.p.A.) relating to the joint takeover of Edison mentioned in section 6.3.1.3.1.2 "Joint takeover of Edison by EDF and A2A";
- the industrial partnership agreement entered into with Exeltium and detailed in section 6.2.1.2.3 ("Supplying energy and related services");
- the cooperation agreement entered into with Enel relating to nuclear mentioned in section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet") and Memorandum of Understanding relating to fossil-fixed generation means mentioned section 6.2.1.1.5 ("Fossil-fired generation ("THF")");
- partnership agreement entered into with Constellation Energy mentioned

in section 6.3.2.3 ("United States of America");

- the agreement entered into with Constellation Energy in respect of the acquisition of 49.9% of the nuclear activities of Constellation Energy (see section 6.3.2.3 ("United States of America"));
- funding agreement relating to the acquisition of British Energy (see section 9.2.2.1.1 ("Development of nuclear activities worldwide") and note 4.1 to the consolidated financial statements for the year ended December 31, 2008;
- joint-venture agreement entered into with China Nuclear Power Energy Corporation mentioned section 6.3.3.1 ("The EDF Group's activities in

For information relating to the contracts concluded by the Group during the 2008 financial year, see notes 11 and 40 to the consolidated financial statements for the financial year ended December 31, 2008.

# Third party information and statement by experts and declarations of any interest

None.

# Documents available to the public

**24.1** Consultation of legal documents

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24.2 Person Responsible

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# 24.1

#### **Consultation of legal documents**

All the legal documents relating to the Company (by-laws, reports, mail and other documents, historic financial information of EDF and its subsidiaries for the two years preceding the filing of this Document de Référence) which must be made available to the public are available at no charge, during the validity of this Document de Référence, at EDF head office, 22-30, avenue de Wagram, 75382 Paris Cedex 08.

Annex D of this Document de Référence summarizes all the information made known to the public by the EDF group during the last 12 months, in accordance with article 222-7 of the AMF Regulations.

# 24.2

#### Person responsible

**Daniel Camus** Chief Financial Officer

**David Newhouse** Senior Vice-President Investors Relations Tel: 01.40.42.32.45

Email: comfi-edf@edf.fr

# Information on holdings

For information about the companies in which EDF holds an interest that may have a significant effect on assessing its holdings, its financial situation or its financial results, see Chapter 7 ("Organizational structure") and

Chapter 6 ("Business overview") as well as note 43 to the consolidated financial statements for the year ended December 31, 2008.

# Glossary

#### ΔIFΔ

(Agence Internationale de l'Energie Atomique)

International Atomic Energy Agency (IAEA), based in Vienna (Austria).

**ANDRA** (Agence Nationale pour la gestion des Déchets Radioactifs) The French Law of December 30, 1991 established a public industrial and commercial body, the National Agency for the Management of Nuclear Waste (Agence Nationale pour la gestion des Déchets Radioactifs, or "ANDRA"), responsible for the long-term management of radioactive waste. To this end, the Agency, which reports to the Industry, Research and Environment Ministries, brought into service the storage centers based in the Aube region of France for the longterm management of short-lived waste.

#### **Architect-Assembler**

For EDF, the architect-assembler has control over:

- the conception and operation of power plants;
- the organization of development projects;
- the schedule of the completion and costs of construction;
- relations with the Nuclear Safety Authority or ASN; and
- the integration of feedback from operational experience.

**ASN** (Autorité de Sûreté Nucléaire) EDF's role as architect-assembler ensures the control over its industrial policy with respect to the design, construction and operation of its fleet of power plants.

The French Nuclear Safety Authority (Autorité de Sûreté Nucléaire, or "ASN") manages, on behalf

of the French State, nuclear safety and radioprotection in France to protect workers, patients, the public and the environmental risks associated with the use of nuclear energy. It is notably in charge of the external control of nuclear facilities in France. The ASN is an independent administrative authority with more than 300 staff. The ASN is represented at the national level by the Directorate General for Nuclear Safety and Radioprotection (Direction Générale de la Sûreté Nucléaire et de la Radioprotection, or "DGSNR").

# **Balance Responsible Entity**

Entities with which RTE-EDF Transport signs a contract for the financing of shortfalls between forecast and actual consumption and the production of a portfolio of users brought together by the balance responsible entity which plays a role of insurer covering the potential losses arising from the many differences between over- and under- supply.

# **Balancing Mechanism**

Created by RTE, or Electricity Transmission Network, on April 1, 2003, the balancing mechanism gives access to available power reserves as soon as an imbalance develops between supply and demand.

# Becquerel (Bq)

International legal unit for measuring radioactivity. The Becquerel (Bq) is equal to one radioactive disintegration per second. This unit represents such a low level of activity that it is used in multiples: the MBq (megabecquerel or million Becquerels) and the GBq (gigabecquerel or billion Becquerels).

# **Capacity Auctions**

At the beginning of 2001, the Group agreed to auction a portion of its generation in order to allow European energy groups to compete in the French market just as EDF competes in foreign markets. This agreement, signed with the European Commission, stipulated that EDF would sell 6,000 MW of its electricity 'capacities' or 8% of the electricity generated in France.

# Changes in the Group's Scope of Consolidation

The changes in the Group's scope of consolidation in any given year take into account the acquisitions, disposals and changes in the scope of consolidation within the Group.

# Glossary

#### Cogeneration

Generation technique for combined electricity and heat production. The advantage of cogeneration is the ability to capture the heat produced by the fuel whereas in classical electricity generation this heat is lost. This process also allows the same facility to meet the heating (hot water or steam) and electricity needs of both industrial and local authority customers. This system improves the energy efficiency of the generation process and reduces fuel use by an average of 20%.

#### **Combined-Cycle Gas**

The most up-to-date technology for generating electricity in a natural gas-fired plant. A combined cycle is made up of one or several combustion turbines and a steam turbine allowing for an improved yield. The combusted syngas is routed to the combustion turbine, which generates electricity and very hot exhaust gases. The heat from the exhaust gases is retrieved by a boiler, thus producing steam. Part of the steam is then retrieved by the steam turbine to generate electricity.

#### Congestion

Situation in which an interconnection linking the national transmission networks cannot absorb all of the physical flows resulting from the international exchanges required by market operators due to a shortage of capacity in the interconnection and/or the national transmission networks involved.

#### Conversion/Fluorination

Also called "conversion", fluorination allows for the purification of uranium com- pounds and their transformation Into uranium hexafluoride (UF6), allowing their enrichment using current techniques.

CRE

(Commission de Régulation de l'Energie)

The French Energy Regulation Commission (Commission de Régulation de l'Energie, or "CRE") was created on March 30, 2000. Its aim is to monitor the correct functioning of the electricity market. The CRE, an independent body, regulates the process of energy market opening. It ensures that all of the generators and eligible customers have equal access to the network. Within its jurisdiction, this body has powers of supervision and authorization along with the power to settle any disputes and, if required, impose sanctions. For a detailed description of its powers see section 6.5.2.2, "French legislation".

# **Distribution Network**

Downstream from the transmission network, the distribution networks (low and medium voltage) supply the final customer: residential customers, local authorities, small- and mediumsized enterprises.

#### **Downstream**

See "Fuel Cycle" and "Downstream Asset Portfolio".

# **Downstream Asset Portfolio**

Total contractual commitments to sell energy to operators or final customers.

# DRIRE

(Directions Régionales de l'Industrie, de la Recherche et de l'Environnement)

The French Regional Divisions for Industry, Research and the Environment (Directions Régionales de l'Industrie, de la Recherche et de l'Environnement, or "DRIRE") coordinate at a regional level the inspection of facilities specifically registered for the protection of the environment. The DRIRE acts on behalf of the Ministry of the Environment and under the authority of the préfets of each department.

# **EAR** (Earning at Risk)

Financial indicator which gives the statistical measure of the risk of maximum potential loss of a company's profit compared with forecast profit in the event of unfavorable market movements over a given time and a given confidence interval.

# **EBITDA**

Earnings before interest, taxes, depreciation and amortization, corresponds to French "excédent brut d'exploitation".

# **Electricity Supply**

Electricity demand can be broken down into four types of consumption:

- "basic" (or "ribbon") supply is the electricity generated and consumed throughout the year;
- "semi-basic" supply is the electricity generated and consumed over the winter period;
- "peak" supply corresponds to periods of the year when electricity generation or supply is in heavy demand;
- "lace" supply is a complement to "ribbon" supply.

# **Electricity Value Chain**

The electricity value chain includes both deregulated activities (generation and supply) and regulated activities (transmission and distribution).

#### **Energy Gross Margin**

The energy gross margin is built from accounting data in the income statement and represents the margin on energy costs, fuels and delivery coming from energy sales (i.e., electricity and gas)

**Enriched Uranium** 

Uranium whose isotope 235 content, the only fissile material, has been increased from its low natural level (0.7%) to approximately 4% for pressurized water reactor fuel.

**Enrichment** 

Procedure by which the fissile content of an element is increased. In its natural state uranium is 0.7% uranium 235 (fissile) and 99.3% uranium 238 (non fissile). To enable its efficient use in a pressurized water reactor, it is enriched in 235 uranium whose proportion is increased to around 4%.

**EPR** 

European Pressurized Reactor. Belonging to the most recent generation of reactors currently under construction (known as generation 3), it is the result of a Franco-German cooperation, and offers advanced safety, environmental and technical performance.

**FNCCR** 

French National Federation of Licensors and Local Utilities (Fédération Nationale des Collectivités Concédantes et Régies, or "FNCCR").

**Fuel** 

See "Fuel/Assembly".

**Fuel/Assembly** 

Nuclear fuel is in the form of an assembly made up of an array of 264 fuel rods, bound together by a rigid structure made of tubes and grids. Each fuel rod consists of a water-tight zirconium tube into which uranium oxide pellets are piled, constituting the fuel. The assemblies are loaded side by side into the reactor vessel – 205 assemblies are required for a 1,500 MW reactor - to make up the core of the reactor. While in operation, the primary coolant runs through these assemblies from bottom to top, warming up in the process, and carries the resulting energy towards the steam generators.

**Fuel Cycle** 

The nuclear fuel cycle encompasses all industrial operations in France and abroad which enable the supply of the fuel to generate energy in a reactor, then to unload and process it. The cycle can be broken down into three stages:

- · upstream: the processing of concentrates from uranium ore, the conversion, enrichment and production of fuel (which takes more than two years);
- the core of the cycle corresponding to the use of fuel in the reactor: receipt, loading, operation and discharging (which takes three to five years); and
- · downstream: pool storage, reprocessing of burnt fuel in reactors of recoverable material, vitrifi $cation\ of\ high-level\ was te,\ then\ temporary\ storage\ of\ the\ was te\ before\ long-\ term\ management.$

**Generic Hazard** 

In the nuclear field, an unpredictable technical incident common to a set of nuclear plants.

**Greenhouse Emissions** 

Gas retaining part of the solar radiation in the atmosphere and where the increase in its emission is due to human activities (anthropic emissions), producing an increase in the world's average temperature and playing a significant role in climate change. The Kyoto Protocol and the 2003/87/EC modified directive of October 13, 2003 address the six main greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrogen monoxide (N<sub>2</sub>O), fluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF<sub>6</sub>). For the period from 2005-2007, carbon dioxide was the subject in Europe of measures to reduce emissions with the application of national plans for the allocation of greenhouse gas quotas. For the 2008-2012 period, the scope of concerned gases tends to widen. Eventually, gases listed in Annex II of the directive but also "any other gaseous component of the atmosphere, both natural and anthropogenic, that absorb and reemit infrared radiation" are concerned (amended Directive, adopted but not yet published).

**Impact of Exchange Rate Variations** 

The impact of exchange rates entered in the income statement for a financial year, reflects the variations in average exchange rate between the euro and another operational currency in use by the subsidiaries within the Group's scope of consolidation.

Interconnection

Electricity transmission infrastructure, which allows for the exchange of energy between different countries, linking the transmission network of one country with its neighboring states.

**Intermediate Storage** 

Intermediate stage in the process of managing nuclear waste. It involves placing waste packages in a facility to ensure, for a given period of time, their isolation from contact with man and the environment with a view to retrieve them for a further stage in the waste management process.

Intermediate storage facilities are designed, built and managed by the producers of such waste (EDF, COGEMA, CEA) and are close to areas where waste is conditioned.

A customer's voluntary reduction in electric power for compensation.

LDC French local distribution companies.

Natural gas turned into liquid form by reducing its temperature to -162C allowing for a reduction by 600 in its volume.

> System allowing for the measurement, at a given point of the network connection, of the electricity volumes being transmitted or distributed (power, frequency, active and reactive energy).

> > All assets of the gas business, allowing for its availability, transport and management. These might be infrastructure (gas pipelines, storage facilities, GNL terminals, etc.) or contractual (rights relating to pre-determined capacity, procurement contracts, etc.). The midstream segment includes the trading and negotiating activities.

> > "Mixed Oxides". Nuclear fuel based on a mixture of uranium oxides (natural or depleted) and plutonium.

> > The MWh is the energy unit generated by a facility and is equal to the facilities' power, expressed in MW, multiplied by the duration of operations in hours.

1 MW = 1,000 kilowatts = 1 million W

1 MWh = 1 MW generated in one hour = 1 Megawatt hour

1 GW = 1,000 MW = 1 billion W

1 TW = 1,000 GW

This plan defines the total quantity of quotas that the State plans to grant for the quotas exhange system for each multi-year period (2005-2007 NAP 1/2 NAP 2008-2012) and the allocation method used to allocate allowances to the industrial installations concerned.

Zones in France which are not connected to metropolitan France (Corsica and overseas departments).

Electricity generation unit, composed of a nuclear boiler and a turbogenerator set. A nuclear plant unit is essentially characterized by the type of reactor and the power of the turbogenerator set. Most EDF nuclear power plants are composed of two or four units, and less frequently, six.

Polychlorobiphenyls

Polychloroterphenyls

Fraction of the availability power on maximum theoretical power in taking into account only the technical unavailabilities. The availability rate is defined as the ratio between annual real or potential generation capacity with the maximum theoretical generation capacity being = installed capacity X 8,760 hours. The availability rate, which does not factor in technical losses, i.e., planned interruptions, unforeseen outages and test periods, characterizes the technical performance of a plant. For EDF's nuclear facilities in France, the maximum theoretical generation capacity is of 553 TWh (63.1 GW X 8,760 h).

Element with the atomic number of 94 (number of neutrons) of which no isotope (elements whose atoms possess the same number of electrons and protons – thus the same chemical properties – but a different number of neutrons) exists in nature. Plutonium 239, a fissile isotope, is produced in nuclear reactors from uranium 238.

Remote metering of the quantity of electrical energy injected into or drawn from the network.

Interruptibility

ING

(Liquefied Natural Gas)

Metering

Midstream

MOX

MW/MWh

NAP

(National Allocation Plan)

Non-interconnected Zones

**Nuclear Generating Unit** 

**PCB** 

**PCT** 

**Power Plant Availability** 

Plutonium (Pu)

**Remote Metering** 

#### **Renewable Energies**

Energies whose use in generation does not involve the destruction of the initial resource. They are essentially derived from the elements, earth, water, air, fire and the sun. They include hydro, wind, solar and geothermal (energy derived from the heat below the earth's magma) energies as well as tidal and marine wave power and bio-mass (energy derived from living matter, particularly wood and organic waste). Energy resulting from household or industrial waste incineration is often included.

#### Reprocessing

Reactor burnt fuel reprocessing aimed at separating materials that can be recycled (uranium and plutonium) from final waste.

**RPD** 

French public distribution network (Réseaux Publics de Distribution, or "RPD").

**RPT** 

French public transmission network (Réseaux Publics de Transport, or "RPT").

Series

In the nuclear field, a series of plants means a set of nuclear plants with identical generation capacity. EDF's PWR reactor exists in three series: the 900 MW series (34 units of approximately 900 MW each), the 1,300 MW series (20 units) and the 1,500 MW series (four units).

Storage

Storage consists in placing packages of radioactive waste in a facility, ensuring their long-term management, i.e., under safe conditions allowing for long-term risk control.

**Storage Center** 

Low- or medium-level short-lived waste, coming from nuclear plants, from The Hague or Centraco facilities, are sent to ANDRA's Soulaines storage center in the Aube region, which has been operational since 1992. This center has a capacity of 1,000,000 cubic meters and has enough capacity for approximately another 60 years. Very low-level short-lived waste is sent to ANDRA's Morvilliers storage center (also in the Aube region). This storage center was brought into service in October 2003 and has a further operating life of approximately 30 years.

Therms (th)

One therm is equivalent to 1,163 kWh or 4,186.106 joules.

**Transmission Network** 

Network which allows high and very high voltage electricity transmission from generation sites to distribution networks or industrial sites which have direct access. It includes the national grid, and interconnections (400,000 volts and 225,000 volts) and the regional dispatch networks (225,000 volts, 150,000 volts, 90,000 volts and 63,000 volts).

Tritium (H3)

Hydrogen isotope, which emits beta rays, present in pressurised water reactor effluents.

Ultracentrifugation

This process involves very high speed spinning in a vacuum of a cylinder containing uranium hexafluoride (UF<sup>6</sup>). Through the effect of the centrifugal force, the heavier molecules (<sup>238</sup>U) aggregate at the periphery while the lighter ones (235U) move towards the center, creating an isotopic separation effect.

UO(2)

Natural uranium, fluorinated and then enriched. Uranium oxide, a particularly stable chemical form of uranium used as fissile material in fuel assemblies of pressurized water reactors.

**Upstream** 

See "Fuel Cycle" and "Upstream Asset Portfolio".

**Upstream Asset Portfolio** 

All assets guaranteeing the availability of electrical energy. These may be actual physical assets (such as power plants) or their contractual equivalent: long-term contracts, shareholdings, contracts giving the right to a proportional share of generated energy.

Uranium (U)

In its natural state, uranium is a mix containing three main isotopes (elements whose atoms have the same number of electrons and protons, thus the same chemical properties, but a different number of neutrons):

- uranium 238, 99.3% fertile
- uranium 235, 0.7% fissile
- uranium 234

Uranium 235 is the only natural fissile isotope, a quality which justifies its use as an energy source.

# Glossary

#### URE

(Re-enriched uranium)

#### URT

(Reprocessed uranium)

#### VAR

(Value at Risk)

#### Vitrification

Waste

To be used in a reactor, reprocessed uranium (Uranium de Retraitement, or "URT"), even if containing more fissile uranium than in its natural state, must be further enriched. It is therefore called re-enriched uranium (Uranium Réenrichi, or "URE").

Reprocessed uranium (Uranium de Retraitement, or "URT"), uranium derived from burnt fuel reprocessing, differs from natural uranium as it contains slightly more uranium 235 and more uranium isotopes. It is recyclable and URT fuel assembly refueling is commonly used in reactors.

Financial indicator giving the statistical measure of potential maximum risk of loss of economic value (market value or mark to market) to a portfolio of cash flows in the event of unfavorable market movements over a certain period of time and a given confidence interval.

Process of immobilization in a glass structure of concentrated solutions of high-level waste through a mix at high temperature with glass paste.

The nuclear generation of 1 MWh of electricity (equivalent to the monthly consumption of two households) produces around 11 g of total waste across all categories.

Short-lived waste represents more than 90% of the total, but contains only 0.1% of the radioactivity of waste. According to their level of radioactivity this sort of waste is subdivided into two different categories: very low-level waste and low-level waste.

Long-lived, medium- and high-level waste is only produced in smaller quantities – less than 10% of the total - but it contains most of the radioactivity (99.9%).

# Appendix A EDF GROUP

2008 Report by the Chairman of the EDF Board of Directors on Corporate Governance, internal control and risk management procedures

# Introduction

In application of article L. 225-37 of the French Code of Commerce (Code de Commerce), this report covers the conditions of governance (preparation and organization of Board of Directors' meetings, missions and functioning of the Board of Directors' committees, information and training of Board directors, corporate governance code, Shareholders' Meetings - §1) of Électricité de France ("EDF" or the "Company"), as well as the internal control and risk management procedures implemented within the EDF group (§2). For the purposes of this report "the EDF group" comprises:

- the EDF company;
- its subsidiaries in the regulated sector: RTE and ERDF, respectively responsible for operating the energy transmission and distribution networks, for which the legal and regulatory framework (French law of August 9, 2004, amended by notably the French law of December 7, 2006) provides for a specific management independence that limits the control over their activities: "the regulated subsidiaries";
- its other subsidiaries, direct or indirect, that are majority controlled, in France or internationally: "the controlled subsidiaries";
- its affiliates which are jointly controlled on a financial level, without exclusive operating control (EnBW, Edison, Dalkia International, etc.): "the jointly-controlled affiliates";
- affiliates in which the Group has direct or indirect minority holdings: "the Shareholdings".

Note 1: the scope for the Group's consolidated financial statements is detailed in the notes to the consolidated financial statements ended Decem-

Note 2: the information specific to the three subsidiaries RTE, EDF Énergies Nouvelles and Électricité de Strasbourg is available in the Financial Security Law reports produced by these three companies.

The practice and terms for exercising control may differ depending on the specific area of activity or the types of entity outlined above, and will be specified as necessary within this report.

With respect to the section describing internal control and risk management (§2), the structure of this report is based on the COSO (1) reference system and its contents take into account the internal control recommendations from the French financial markets authority, (Autorité des Marchés Financiers – AMF (2)). The description of the organization of internal control thus comprises five chapters which describe the elements relating to the Control environment (§2.1), Risk management and control policy (§2.2), Communication and information dissemination (§2.4), and Activities relating to the monitoring of Group internal control (§2.5) and Group control activities (§2.3), divided into four separate sections which correspond to the four internal control objectives specified in the AMF guidelines:

- Internal control procedures relating to the implementation and optimization of operations (§2.3.1);
- Internal control procedures relating to the reliability of financial information (§2.3.2);
- Internal control procedures relating to compliance with laws and regulations (§2.3.3);
- Internal control procedures relating the application of corporate management instructions and orientations (§2.3.4).

Finally, in addition to the changes in the internal control procedures outlined in this report, the last section reiterates the overall major orientations relating to the development of internal control within the EDF group (§3).

This report has been produced by a working group coordinated by the Corporate Audit Division, with contributions from experts in Legal Affairs, Corporate Risk Management and Accounting, and from the offices of the Corporate Secretary to the Board of Directors and the Chairman and CEO's office. Contributions were also sought from the Ethics and Compliance teams, the Information Systems Division, the Human Resources Division, the delegation of Board Directors and Companies, the Sustainable Development Division and the Investor Relations Division. The report was approved by the Board of Directors meeting of February 11, 2009, pursuant to French law no 2008-649 of July 3, 2008.

# 1. Corporate governance

# Preparation and organization of Board of Directors' meetings

# 1.1.1 Composition and powers of the Board of Directors

Since the Shareholders' Meeting of February 14, 2006, pursuant to article 6 of the law relating to the democratization of the public sector of July 26, 1983 and the provisions of the amended decree-law of October 30, 1935, the French State holding less than 90% of EDF's share capital, the Board of Directors comprises 18 members:

• one third are employee representatives: Mrs Marie-Catherine Daguerre and Messrs Jacky Chorin, Alexandre Grillat, Philippe Pesteil, Jean-Paul Rignac and Maxime Villota;

• two thirds are appointed by the Shareholders' Meeting having been proposed by the Board of Directors, subject to the State representatives appointed by decree.

The French State has appointed six representatives by decree: Messrs Pierre-Marie Abadie, André Aurengo, Bruno Bézard, Gérard Errera, Yannick d'Escatha and Philippe Josse.

- 1 Committee of Sponsoring Organizations of the Treadway Commission.
- 2 Published January 22, 2007.

The Shareholders' Meeting of February 14, 2006 consequently appointed six directors: Messrs Pierre Gadonneix, Frank Dangeard, Daniel Foundoulis, Claude Moreau, Henri Proglio and Louis Schweitzer. Louis Schweitzer having resigned on May 10, 2008, the Shareholders' Meeting of May 20, 2008 appointed Bruno Lafont as his replacement.

The term of office of these Board directors runs until November 22, 2009 inclusive. The list of mandates exercised by the corporate officers outside the company are listed in section 14.1.2 of the EDF 2008 Reference Document.

In addition, the following attend Board meetings without the right to vote: the Head of the French State Economic and Financial Control Commission (1) mission to the company and the Secretary of the Corporate Works Council.

The Board of Directors determines the orientations of the Company's activities and oversees their implementation. It deliberates on all the strategic, economic, financial or technological orientations concerning the Company as well as matters expressly entrusted to it by law or which it has reserved for itself.

Pursuant to the update of the internal regulation approved on December 17, 2008, the involvement of the Board of Directors is normally required on the following matters:

- organic or external growth operations or disposals which represent financial exposure for the Company in excess of €200 million. This threshold is reduced to €50 million for acquisitions which are not in line with the Company's strategic objectives;
- real estate transactions exceeding €200 million;
- certain financial transactions, when their amount exceeds a pre-determined value, subject each year to the Board's exceptional deliberation. Thus, in 2008, the Board set the following thresholds: certain financial operations with an individual nominal value exceeding €4 billion and sureties, endorsements or guarantees exceeding €500 million. Additionally, the Chairman and Chief Executive Officer advises the Board of sureties, endorsements or guarantees whose unit value is above €100 million, agreed in the name of the Company or by a business controlled by the Company;
- contracts (supplies, works or services with or without financial commitment) involving amounts, including as necessary subsequent endorsements signed during the same year, equal to or exceeding €200 million, or between €100 million and €200 million inclusive if these contracts relate to a new strategic orientation or a new business
- long-term contracts for the purchase or sale of energy, CO<sub>2</sub> emission credits and quotas, by the Company or by an exclusively controlled company, for annual volumes or amounts in excess of:
- 10 TWh for electricity.
- 20 TWh for gas (long-term contracts for the purchase or sale of gas above 5 TWh and below 20 TWh are also subject to detailed reporting to the Board of Directors' meeting following their signature),
- €250 million for coal and carbon dioxide;
- nuclear fuel cycle operations: particularly the strategies relating to the upstream and downstream operations in the nuclear fuel cycle;
- operations to transfer obligations relating to decommissioning or the downstream of the nuclear fuel cycle.

In 2008, the Board of Directors thus examined and approved, in addition to numerous matters concerning the Company's normal activities, major matters such as:

• the acquisition of British Energy in the United Kingdom, a matter which required two joint meetings of the Audit Committee and the Strategy

- Committee extended to all the Board directors and a number of Board of Directors meetings;
- the project to acquire, via a joint venture, 49.99% of the nuclear assets of Constellation Energy in the United States, which is still subject to a number of authorizations in the United States and of which all stages were reviewed by the Board;
- the acquisition of gas assets in the North Sea;
- the partnership project with Chinese company China Guangdong Nuclear Power Holding Company Limited (CGNPC) and the purchase of a shareholding by EDF International alongside CGNPC, in a Chinese company that will, in time, own and operate two EPR-technology nuclear units at the Taishan site in China.

# 1.1.2 Appointment and powers of the Chairman of the Board of Directors and the Chief Officers

The Chairman of the Board of Directors assumes the function of Chief Executive Officer and is appointed by decree on proposal by the Board of Directors.

Following the Shareholders' Meeting of February 14, 2006, the Board of Directors proposed to the French Government the appointment of Mr Pierre Gadonneix as Chairman and Chief Executive Officer. This appointment was ratified by decree on February 15, 2006.

The Chairman and Chief Executive Officer has full powers to commit the Company, subject to those attributed to the Board of Directors (see §1.1.1).

Following recommendation by the Chairman and Chief Executive Officer and the majority of members present or represented, the Board of Directors may appoint up to five Chief Officers. The extent of their powers and the duration of their terms of office are conferred on them by the Board of Directors in agreement with the Chairman and Chief Executive Officer. At the end of 2008, the Chief Officers were:

- Daniel Camus, Chief Financial Officer;
- Dominique Lagarde, Chief HR and Communications Officer;
- Jean-Louis Mathias, Chief Operating Officer, Integration and Deregulated Operations in France.

# 1.1.3 Evaluation of the functioning of the Board of Directors

The Board of Directors met 20 times during 2008 and 23 Committee meetings were held to prepare for these meetings (see §1.2).

The attendance rate for Board directors at Board meetings, which was relatively stable in the 2004-2008 period (averaging 82.8%), was 82.4% in 2008. Consistent with the guidelines on high standards of corporate governance (notably based on the Viénot and Bouton reports or the AFEP-MEDEF report of October 2003) which recommend that the functioning of the Board of Directors be evaluated, the Board's internal regulation states that the Ethics Committee "should undertake an annual evaluation of the functioning of the Board of Directors and report back on areas requiring further consideration".

Furthermore, EDF has decided to entrust this evaluation to an external company every three years. Thus, on October 17, 2007, the Ethics Committee having mandated an external company, this evaluation was

1 Pursuant to the decree of May 26, 1955, this Commission exercises French State economic and financial control. It may exercise control procedures with a wide remit

carried out during December 2007 and January and February 2008, through in-depth interviews with each of the Board directors. The results were examined by the Ethics Committee and presented to the Board of Directors during the first half of 2008. They show that the organization and functioning of the Board of Directors is very satisfactory even if a number of points reveal areas for potential improvement. The updated internal regulation of the Board of Directors, approved in December 2008, notably took into account a number of these recommendations.

# 1.2

# Missions and functioning of the Board of Directors' committees

In order to conduct its duties, the Board of Directors is supported by a number of specialized consultative committees, tasked with reviewing and preparing specific reports prior to their submission to the full Board. At the end of 2008, these committees were: the Audit Committee, the Committee for Monitoring Nuclear Commitments (Comité de suivi des engagements nucléaires - CSEN), the Strategy Committee, the Ethics Committee and the Appointments and Remuneration Committee.

# 1.2.1 Audit Committee

The Audit Committee, comprised of five Board directors, is chaired by Mr Dangeard, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The other members are Messrs Bézard and d'Escatha, Board directors representing the French State and Messrs Chorin and Villota, Board directors elected by the employees.

The Audit Committee undertakes the tasks which are reserved to it pursuant to ruling No. 2008-1278 of December 8, 2008 that transposes the European directive of May 17, 2006 concerning the legal control of annual and consolidated financial statements. The committee regularly reviews reports from the Statutory Auditors, Executive Management, the Corporate Finance Division, the Senior Vice President, Corporate Audit and the Senior Vice President, Corporate Risk Management. Prior to their submission to the Board, the committee reviews and comments on:

- the Company's financial situation:
- the Medium Term Plan and the budget;
- the draft financial report established by the Corporate Finance Division (EDF company financial statements and the Group's consolidated financial statements and management report);
- the monitoring of the Company's risks (the Group's risk control strategy, in particular, is regularly examined by this Committee which also reviews, every half year, the Group's consolidated risk mapping and the methods for controlling risks);
- audit and internal control: organization and evaluation of internal control, half-year audit programs, the main findings and corrective measures resulting from them, monitoring of their implementation as well as the draft annual report of the Chairman of the Board of Directors on corporate governance, the internal control procedures and risk management.

In addition to these missions, since the updating of the internal regulation in December 2008, the review of the financial aspects of external growth transactions or disposals of a particularly significant nature

During 2008 the Audit Committee reviewed in particular:

• the British Energy acquisition project, jointly with the Strategy Committee:

- the strategy on insurance;
- the robustness of the internal control procedures concerned by the sectors the most impacted by the financial crisis, which led to a review of the policies on counterparty risk and on the Group's consolidated exposure at September 2008, the Group's financial market and energy risk policies, the procedure for managing the funds dedicated to the future decommissioning of nuclear facilities together with the existing internal control procedures at EDF Trading or in EDF's trading room.

The average attendance rate for the Audit Committee was 77.5% for the eight meetings held during 2008, of which two meetings were held jointly with the Strategy Committee.

# 1.2.2 Committee for Monitoring Nuclear **Commitments**

The Committee for Monitoring Nuclear Commitments (CSEN) comprises at least five Board directors and has been chaired, since November 2008, by Mr Frank Dangeard, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The Committee for Monitoring Nuclear Commitments had previously been chaired by Mr Bruno Bézard, a Board director representing the French State who resigned on July 1, 2008. The other members are Messrs Abadie and d'Escatha, Board directors representing the French State and Messrs Chorin and Villota, Board directors elected by the employees.

The Committee's role is to monitor the change in nuclear provisions, to comment on governance issues relating to the dedicated assets, on the rules for the association of assets and liabilities and on the strategic allocation, and to verify that management of the dedicated assets constituted by EDF within the framework of the policy for constituting and managing the dedicated assets complies with the adopted rules. To this end, it may call on the support of the Nuclear Commitment Financial Expertise Committee (Comité d'Expertise Financière des Engagements Nucléaires – CEFEN) which comprises five independent experts and whose mission is to assist the Company and its governance bodies in such matters.

This Committee met twice in 2008, with an average attendance rate of 83.3%.

# 1.2.3 Strategy Committee

The Strategy Committee, comprised of seven Board directors, is chaired by Mr Proglio, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The other members are Messrs Abadie, Bézard, and Errera, Board directors representing the French State and Mrs Daguerre, Messrs Grillat and Pesteil, Board directors elected by the employees.

The Committee comments to the Board of Directors on the Company's major strategic orientations, and, specifically, the strategic reference framework, the industrial and marketing strategy, the Public Service Agreement, the strategic agreements, alliances and partnerships, the research and development strategy, internal and external growth projects or disposals requiring approval from the Board of Directors.

In 2008, it thus reviewed the strategies linked to the acquisition of British Energy, solar photovoltaic energy, urbanization and positive energy buildings and the prospective electricity generation methods through to 2050.

The Strategy Committee met five times in 2008, of which two meetings were held jointly with the Audit Committee, with an average attendance rate of 71.4%.

# 1.2.4 Ethics Committee

The Ethics Committee, comprised of six Board directors, is chaired by Mr Aurengo, a Board director and a respected figure from outside the EDF group representing the French State. The other members are Messrs Foundoulis and Moreau, Board directors appointed by the Shareholders' Meeting, Messrs Chorin, Pesteil and Rignac, Board directors elected by the employees.

The Committee ensures that ethical considerations are taken into account in the work of the Board of Directors and in the management of the Company. It reviewed the annual report excluding the financial statements (corporate and sustainable development reports), the reports from the Ethics and Compliance Advisor, as well as the reports from the Mediator and the Senior Vice President, Nuclear Safety and Radioprotection and that of the Head of Hydro Safety.

Furthermore, the Ethics Committee conducts an annual evaluation of the functioning of the Board of Directors and the application of its internal regulation, and suggests areas for further consideration.

In 2008, this Committee continued its review of the policy on partnership with nuclear service suppliers and, within this framework, visited the Cattenom plant. Together with Board directors from outside the Committee, it worked on updating the internal regulation and on analyzing the AFEP-MEDEF recommendations of October 6, 2008 relating to the compensation of the corporate officers of listed companies which was approved by the Board of Directors meeting of December 17, 2008.

In 2008, the attendance rate for the Ethics Committee averaged 96.7% for five meetings.

# 1.2.5 Appointments and Remuneration **Committee**

The Appointments and Remuneration Committee comprised of three Board directors, has been chaired, since December 2008, by Mr Lafont, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The other two members are Messrs Dangeard, a Board director appointed by the Shareholders' Meeting and also a respected figure from outside the EDF group and Mr Bézard, a Board director representing the French State.

The Committee submits proposals to the Board of Directors regarding the appointment of Board directors by the Shareholders' Meeting. It comments on the compensation of the Chairman and Chief Executive Officer regarding the salary, variable portion (including the target criteria was well as its opinion of the results achieved by the Chairman and Chief Executive Officer relative to the objectives set) and his peripheral compensation prior to its submission for approval to the Minister responsible for the economy and finance and the Minister responsible for energy. It also communicates this opinion to the Board of Directors for deliberation and the setting of this compensation.

The Committee examines the compensation of the Chief Officers and comments on the proposals submitted to it by the Chairman and Chief Executive Officer with regard to the salary, variable portion (including the target criteria as well as its opinion of the results achieved by each Chief Officer relative to the objectives set) and their peripheral compensation. It submits its proposals and opinion, for approval to the Minister responsible for the economy and finance and to the Minister responsible for energy and also communicates this to the Board of Directors. The Board of Directors deliberates and sets the salary, objectives and peripheral compensation of the Chief Officers.

It comments to the Board of Directors on the conditions for establishing the compensation of the main top executives (fixed and variable portion, calculation method and indexation), as well as on the amount and conditions of Board directors' fees. It ensures the existence of succession plan charts for Executive Committee positions (see § 2.1.6.1).

Information relating to the compensation of corporate officers can be found in section 15.1 of the EDF 2008 Reference Document.

In 2008, this Committee met three times with an attendance rate of 88.9%.

# 1.3

# **Information and training for Board directors**

At each Board of Directors' meeting, the Chairman and Chief Executive Officer draws to the attention of Board members the main facts and significant events arising in the Company since the previous Board meeting.

The Corporate Secretary of the Board of Directors also communicates information to Board directors, which they may supplement by meeting with the Group's main top executives on matters arising on the Board's agenda.

In addition, the Secretary to the Board of Directors organizes information meetings on complex matters or those of major strategic importance or on issues requested by Board directors. Thus, in 2008, the Board of Directors visited the EPR site at Flamanville and the Renardières research and development center with a view to work linked to energy efficiency.

The Corporate Secretary to the Board of Directors organizes training requested by the Board directors.

# **Corporate Governance Code**

Having reviewed the AFEP-MEDEF recommendations of October 2008, cited in the Council of Ministers' communication of October 7, 2008, on the compensation of corporate officers and at the proposal of the Remuneration Committee, the Board of Directors' meeting of December 17, 2008 expressed its agreement on the recommendations. The Board considered that these recommendations were consistent with the EDF corporate governance approach that had been in existence for some time and noted that the recommendations applicable to the company had already been implemented.

Subject to the legislative and regulatory specificities applicable to it, these recommendations will be an integral part of the corporate governance code to which the Company will refer, pursuant to article L. 225-37 of the French Commercial Code.

# 1.5

# **Shareholders' Meetings**

The conditions relating to shareholder participation in the Shareholders' Meeting are found in article 20 of the company's by-laws, and are outlined in section 21.2.6 of the EDF document de référence.

Furthermore, the information foreseen by article L. 225-100-3 of the French Code of Commerce is published in the Company's annual financial report.

# 2. EDF group internal control

The aim of this document is not an exhaustive presentation of all the control procedures existing within the Group; rather it focuses on those concerning activities or risks deemed to be significant, as well as on the main long-term procedures in effect in 2008, highlighting any changes and the key initiatives developed during that year.

# **Control environment**

# 2.1.1 Management bodies of corporate management

The management bodies are organized to fulfill two major priorities: improve functioning as an integrated Group while respecting the management autonomy of the regulated subsidiaries and involve operating personnel in the decision-making process.

Since April 1, 2006, the Top 4, comprising the Chairman and Chief Executive Officer and the three Chief Officers, is the decision-making body of Group's corporate management. The Executive Committee is the forum for strategic discussion and consultation on all cross-functional and cross-divisional matters and comprises the members of the Top 4, the Senior Executive Vice Presidents, the Corporate Secretary and the Chief Executive Officers of EDF Energy, EnBW and Edison.

A limited number of specific decision-making committees support the work of the Top 4: the Coordination Committee France, the Commitments and Shareholdings Committee (Comité des Engagements et Participations – CEP), of which an ad hoc form may handle fuels alone (CEP-fuel Committee), the Senior Executive Management Committee, the Nuclear Safety Advisory Board, the Upstream-Downstream Trading Committee and the International Nuclear Board. In addition, ad hoc committees or boards are assembled to handle strategic issues of a temporary nature such as, for example, the project to integrate British Energy within the Group.

The decision of March 14, 2008 also specified the conditions for governance by EDF of its two subsidiaries in the regulated sector (RTE and ERDF) given the regulatory obligations specific to these activities. A Regulated Assets Committee, comprising notably the Top 4, the Chairmen of the Supervisory Boards of RTE and ERDF together with the Head of governance for the regulated sector, was created in order to ensure the preservation of EDF's interests as an investor in the regulated sector while guaranteeing the management independence of the subsidiaries concerned.

# 2.1.2 Internal control policy

The roll-out of the new Internal Audit and Control Policy, signed by the Chairman on March 7, 2006, was pursued during 2008 in all Group companies, having been adapted for specific circumstances within the

The main drivers implemented in the framework of this strategy within EDF are outlined below (see §2.1.6.4 and §2.5).

With regard to the subsidiaries and affiliates, in addition to the orientations of the new Internal Control and Audit Policy, a formal decision was taken by the Chairman on September 22, 2008 aimed at strengthening risk management in all the Group's subsidiaries and affiliates. It expressly tasks all Board directors concerned to monitor the implementation, through the governance bodies of these subsidiaries and affiliates, of risk mapping and internal control and audit procedures, and with requesting three-yearly audits of these procedures at the initiative of the governance bodies in which they participate. The Senior Vice President, Corporate Audit and the Senior Vice President, Corporate Risk Management were tasked with assisting the implementation of this process across the Group. The main related initiatives are outlined below:

Concerning the controlled entities and subsidiaries, the internal control policy establishes the reference framework in matters of internal control and internal audit applicable to these entities. Each of the levels of control is consistent with the corresponding level of delegated management authority (entity regrouping basic operating entities or subsidiaries reporting directly to corporate management), each level being responsible for managing its own activities and for monitoring the control procedures for the activities it has delegated. Anomalies detected by one management level, along with the procedures to ensure they are rectified, are reported to the level above.

Each head of a regrouped operating or support function entity has appointed an "Internal Control Coordinator" and the coordination of this network is ensured by the Corporate Audit Division (professional standards, regular meetings, establishment of control and self-assessment reference frameworks, background documents shared on the intranet, etc.)

An internal control reference guide has been established and offered to each entity to help implement internal control procedures. This guide, based on the COSO chapters, characterizes the risk areas concerned, identifies the main aims of internal control to be explored and suggests best practice to be implemented. It is updated annually in the light of shared experience or new control requirements such as, for example, new internal policies.

At the end of 2008, each of the 37 operating entities and controlled subsidiaries produced a second annual report on internal control outlining, notably, their internal control procedures, a self-assessment of these procedures, the commitment of the executive as to his or her aims and an account of the measures envisaged to achieve these aims. In 2008, around one third of the internal control procedures in the entities concerned were audited by the Corporate Audit Division which will pursue this approach in order to audit all the 37 entities involved over a three-year period. These audits confirmed the satisfactory deployment of the new Internal Control and Audit Policy over the audited scope. They also enabled a number of areas for improvement to be identified for which action plans were established by management and are in the process of implementation.

As of 2007, the functional entities established internal control objectives relating to the application of major policies within their areas of responsibility. These objectives were included in the internal control reference guide approved by the Top 4 in October 2007 and implemented by the operating entities through their own internal control procedures, consistent with the Internal Control and Audit Policy. A significant number of improvements were made in 2008 in terms of Information Systems via the introduction of control objectives dedicated to the IS expert entities in addition to the control for which operating management is responsible.

Concerning the other Group affiliates, the implementation of the aforementioned Chairman's decision of September 22, 2008 was initiated under the responsibility of the Corporate Audit and Corporate Risk Management Divisions. This took a number of different forms:

- direct support for the Board directors of the fifteen or so main affiliates to help them to implement and oversee the approach within governance bodies aimed at managing risks, audit and internal control;
- deployment in the other Group affiliates, under the responsibility of the head of the regrouping branch or division, tasked with providing the same level of support to the Board directors of the affiliates in his or her area of responsibility, and of providing a status report in his or her annual self-assessment report.

Furthermore, note that the two main international jointly-controlled affiliates (EnBW and Edison) have committed to the deployment of internal control procedures consistent with the transposition into national law of the European directives 2006/43 and 2006/46. The two companies have adopted the COSO international reference framework and regular discussions have taken place with the Corporate Audit Division aimed at sharing the tools, reference frameworks and experience acquired within EDF since 2006.

The regulated subsidiaries (RTE and ERDF) deploy their own internal control procedures and report back on this through their governance bodies.

# 2.1.3 Internal Control Functional Bodies

#### 2.1.3.1 CORPORATE FINANCE DIVISION

The Corporate Finance Division maintains a watching brief on market developments and financial techniques and analyzes the financial risks associated with projects. The Commitments and Shareholdings Committee is chaired by the Chief Financial Officer (see 2.3.1.2.1).

Within Corporate Finance, Group Controlling:

- Management Control is responsible for:
- Steering the forecasting processes of the Group's (1) management cycle (budgets and Medium Term Plans based on the Industrial Project), summarizing the main results and arbitrating between conflicting claims at branch, division and Group level. It acts as an alert mechanism, prior to a decision being taken, by notifying the parties concerned of the consequences of the planned projects or the performance levels proposed, and provides analytical support,
- Helping operating management to monitor performance: the tracking of budget execution (involving re-forecasting four times a year) and operating results is effected through regular broad-based performance reviews across all branches and divisions and the majority-controlled subsidiaries,
- Acting as Group financial controller, notably by participating in investment monitoring and conducting analysis to ensure economic and financial optimization.

<sup>1</sup> The scope of the Group's management cycle is that of the consolidated financial statements and is detailed in the notes to the consolidated financial statements.

Management Control is embedded at the level of each management entity. The Controllers are members of the Management Committees of the entities to which they belong. Heads of Financial Management in the branches or divisions are appointed and evaluated by the Chief Financial Officer.

#### • Accounting is responsible for:

- specifying the Group's accounting rules and methods which must enable the appropriate accounting treatment and the correct accounting input from the upstream processes,
- the annual updating, for EDF, of the internal control reference frameworks, assessing the accounting quality implemented by process and organizing feedback on implementation by the entities of the control procedures stipulated in the accounting and financial area (see § 2.3.2.3).

Additionally, within the scope of the directly-controlled subsidiaries, the accounting internal control policies are the responsibility of each of the Finance Departments.

#### 2.1.3.2 CORPORATE RISK MANAGEMENT DIVISION

For many years the EDF group has implemented a strategy for managing its operating, financial and organizational risk.

Faced with an evolving context, EDF decided, as of 2003, to establish an overall process for managing and controlling its risks to strengthen the existing procedures by creating the Corporate Risk Management Division. The Corporate Risk Management Division is notably respon-

- implementing and updating the consolidated risk mapping process, either directly for the EDF scope and that of the controlled subsidiaries or through the governance bodies of the regulated and jointly-controlled subsidiaries and affiliates (see §2.2);
- alerting the Chairman and Chief Executive Officer and the Top 4 as to emerging risks or those which have not been adequately identified;
- consolidating and updating the risk control policy, either directly within the EDF scope and that of the controlled subsidiaries, or through the governance bodies of the regulated or jointly- controlled subsidiaries and affiliates (see §2.2) in, notably, ensuring the comprehensiveness and consistency of the various sector risk control policies (see §2.3.1.1);
- ensuring the deployment of the energy market risk policy within the EDF scope and that of the controlled subsidiaries and, more generally, ensuring the control of these energy market risks either directly, within the EDF scope and that of the controlled subsidiaries, or through the governance bodies of the regulated or jointly-controlled subsidiaries and affiliates (see §2.3.1.1.1);
- · defining, implementing and consolidating a financial risk control policy (interest and currency exchange rates, liquidity, equities and counterparty) for the EDF Scope and that of the controlled subsidiaries and ensuring the control of these financial risks through the governance bodies of the regulated or jointly-controlled subsidiaries and affiliates (see §2.3.1.1.2):
- managing the comprehensiveness and relevance of the risk analysis conducted on projects involving investment and long-term commitments and submitted to the Top 4-level bodies for approval;
- updating the policy on crisis management for the EDF scope and that the controlled subsidiaries, and defining the terms of cooperation with the regulated subsidiaries during periods of crisis (see §2.2);
- ensuring the control of all suppliers and sensitive contracts in liaison with Purchasing and the Business branches concerned within the EDF scope.

#### 2.1.3.3 GROUP AUDIT FUNCTION

The Group's audit function comprises all the Group's audit resources involved in internal audit at Group, parent company and subsidiary and affiliate level. It is organized around "dedicated business line" audit teams (in the fields of generation and sales and marketing at EDF) and autonomous audit teams for the main French and international subsidiaries and affiliates (RTE, ERDF, EDF Energy and EDF-Trading, EnBW, Edison). The Corporate Audit Division is responsible for controlling the internal control procedures of EDF and its controlled subsidiaries including the auditing of the dedicated audit teams. The Corporate Audit Division also carries out cross-divisional audits or those of "corporate" importance for the Group for the same scope, while respecting regulatory and governance constraints (1). Responsibility for overseeing this function falls to the Chairman and Chief Executive Officer, who delegates this task to the Senior Vice President, Corporate Audit. Finally the Corporate Audit Division fulfills a coordination function for the whole network (sharing of best practice, initiatives to raise professional standards, upgrading of tools and methods, etc.).

The Corporate Audit Division applies international standards as defined by "The Institute of Internal Auditors" and ensures their promotion, as well as control within the accessible scope (see above).

#### **QUALIFICATION STANDARDS**

- The duties, powers and responsibilities of the auditors, as well as the rights and duties of the audited entities, are defined in a charter which was updated on March 7, 2006, to coincide with the adoption of the new Internal Control and Audit Policy. This charter reiterates the independence of the audit function and its direct reporting line in to the Chairman and Chief Executive Officer, the missions and commitments of internal audit, the duties and the powers of the auditors and of the audited entities
- The Senior Vice President, Corporate Audit reports directly to the Chairman and Chief Executive Officer.
- All the auditors in the Corporate Audit Division and the business line Audit Branches are trained to use the same methodology, consistent with international standards. They are recruited from EDF's different businesses, as well as from external audit offices. Each auditor is evaluated at the end of each mission and a transfer to audit is considered as a positive career move. A protocol agreement has been signed to this effect between the Corporate Audit Division and the Senior Executive Development Division.
- The number of corporate auditors is in line with the industry average: 0.45 auditor for 1,000 employees (2).
- The key processes essential to the proper functioning of the Corporate Audit Division over the chain of activities (from the drawing up of audit programs to the monitoring of the implementation of recommendations) are detailed in the form of quality plans which are regularly reviewed.
- In 2008, an independent evaluation was conducted on operating processes and the quality of the audits conducted by the Corporate Audit Division together with how comprehensively and appropriately the AMF guidelines have been reflected in the definition of and deployment process for the Group's new Internal Control and Audit Policy. This evaluation confirmed the relevance of the work undertaken and the resources deployed. It also proposed a number of improvements which will be the subject of an action plan in 2009.
- 1. According to case by case agreements via the governance bodies of the non-controlled affiliates and regulated subsidiaries.
- 2. Source French Institute of Audit and Internal Control (Institut Français de l'Audit et du Contrôle Interne – IFACI): result of the study on internal audit practice in France in 2005.

#### STANDARDS OF FUNCTIONING

- The Corporate Audit Division coordinates the deployment of the internal control policy and the internal control function, ensures the control of the internal control procedures in the various controlled branches, divisions and subsidiaries and conducts both cross-divisional and corporate-level audits.
- The half-year audit program is decided by the Chairman and Chief Executive Officer then submitted to the Audit Committee. It is established taking into account:
  - the Group's internal control policy (missions to audit the internal control procedures of entities within the controlled scope);
  - the risks identified in the Group's risk mapping;
  - the monitoring of the implementation of decisions taken by the Executive Management;
  - major projects and the principal corporate processes;
  - requests from corporate management, excluding the snap audits requested during the execution of the program;
  - audits of the second line controlled subsidiaries, on behalf of the branches and divisions responsible (for example, International Operations and Group Synergies);
  - joint audits with EnBW within the scope of this management structure, as well as with Veolia Environnement for the Dalkia International scope, and "corporate" audits conducted within the scope of EDF Energy and EDF-Trading.
- All audits give rise to recommendations which, after ratification by the audited entities and their management, form the basis for action plans on their part, which are submitted for approval to the Corporate Audit Division. During the year following the audit, the Corporate Audit Division monitors the progress on the implementation of these remedial plans, the audit considered to have reached a satisfactory conclusion only when these measures have been fully implemented. An unsatisfactory conclusion to an audit or one where reservations are expressed triggers a management alert for the relevant Chief Officer.
- A half-year summary report is established by the Corporate Audit Division, summarizing the main audit findings and the corresponding remedial management action, as well as the results of audit exercises concluded during the period. It also identifies possible recurring or generic problems appearing over the course of several audits conducted during the period which are worthy of the particular attention of the Top 4. This report is presented first to the Chairman and Chief Executive Officer, then to the Top 4 followed by the Audit Committee.

# 2.1.3.4 LEGAL AFFAIRS DIVISION

In order to remain as close as possible to the decision-making bodies, whether at Top 4, branch, division or regional level, the organizational structure of the Legal Affairs Division is based on that of EDF. Legal Affairs is consulted whenever contracts have to be drawn up and whenever the legal risks relating to corporate projects have to be analyzed. It also ensures the centralized monitoring of major litigation. All of its activities enable it to fulfill an alert function and to play a role in avoiding litigation.

Further to a decision taken by the Chairman and Chief Executive Officer in May 2007, Legal Affairs is managing the deployment of a contract database aimed at centralizing all of EDF's major contractual commitments and those of a number of subsidiaries and affiliates (excluding the regulated and jointly-controlled subsidiaries and affiliates). The operating deployment phase began in late 2007 and continued in 2008.

# 2.1.4 Delegations of power and technical authorizations

The Chairman and Chief Executive Officer and the Chief Officers delegate certain powers granted to them by the Board of Directors to their immediate associates. Such delegations of power provide the basis for further delegation to the main operating executives. Since June 2003, the delegations of power have enabled increased control over procurement, with only the Senior Vice President, Purchasing able to sign off on purchasing contracts subject to the powers of the Board of Directors in this matter (see §1.1.1).

The powers of the "nuclear energy operator" have been delegated to the Senior Executive Vice President, Generation, who, in turn, delegates to the Senior Vice Presidents in charge of Nuclear Operations and Nuclear Engineering.

Each facility head, subject to prior evaluation of the appropriate skills, issues the technical authorizations allowing individuals to work in the facilities (power plants, electricity transmission networks, etc.) These requirements apply to all workers, be they employees of EDF or external service providers.

During 2007, Legal Affairs formulated a number of recommendations regarding the existing delegations; the signature process relating to these new delegations was thus initiated in 2007 and was pursued in 2008. Furthermore, a set of guidelines on delegation of powers and responsibilities was circulated in November 2008 in order to ensure that the EDF entities were better informed as to the nature, consequences and management rules applying to delegations of power.

# 2.1.5 Ethics Policy and Environmental Quality

# 2.1.5.1 ETHICS POLICY

The ethics policy based on a decision taken by the Chairman and Chief Executive Officer on March 15, 2007, is supported by a reference document, the Ethics Handbook.

Grounded in the Group's five corporate values (respect for individuals, environmental responsibility, striving for excellence, a commitment to the community, the necessity of integrity), it sets out for EDF the principles governing collective action and individual conduct.

The document was circulated within all EDF branches and divisions during the 2007 fourth quarter and individual copies are handed to each employee by their line managers to be used as a support document in ensuring individual and collective buy-in. The appointment of ethics coordinators in each branch and division then gradually in each unit, to be responsible for helping the managers appointing them to promote the Handbook and encourage respect of the corporate values in the field, strengthens the existing procedure.

EDF's corporate values serve as a reference framework for the ethical procedures in the subsidiaries and affiliates, for codes of conduct developed in the businesses and certain areas, as well as for fundamental processes such as recruitment (recruitment reference framework), training (employee awareness initiatives), relations with suppliers and subcontractors (supplier charter, employee agreement on subcontracting) and individual and collective performance reviews (individual appraisal, bonus criteria).

In 2008, the creation of a Group Sustainable Development Committee comprising the Sustainable Development executives in the different subsidiaries and affiliates such as EDF Energy, Demasz, the Polish subsidiaries, EnBW and Edison enabled the harmonization of the ethical approaches.

# Appendix A

The ethical alert procedure, established since 2004 within the EDF scope, recognizes every employee's right, and that of every external partner, to question the company confidentially but not anonymously on the manner in which the company respects its ethical commitments. Consultation with the Ethics Advisor takes place, for the most part, through a secure ethical messaging system. Furthermore an anonymous toll-free number has been introduced on an experimental scope, enabling each employee to report any difficulties encountered during his or her life in the workplace.

A report on the activity of the Ethics Advisor, whether in terms of the deployment of the ethics approach or the functioning of the ethics alert process, is presented annually to the Ethics Committee of the Board of Directors.

#### 2.1.5.2 ENVIRONMENTAL QUALITY PROCESS

The EDF group has had ISO 14001 certification since April 9, 2002. The certification covers the scope comprising EDF (all its operating entities), a number of French subsidiaries and affiliates (including the regulated subsidiaries RTE and ERDF) as well as some international subsidiaries and affiliates, including EDF Energy. EnBW and Edison are also ISO 14001 certified (but not currently within the Group certification scope). The certification was renewed for the first time in 2005 and a second renewal was announced in 2008 by the independent certification body DNV. The EDF group environmental management system aims to achieve the best-possible response to the ten commitments formulated by the Chairman in the environmental policy signed in June 2005, particularly in terms of climate change and the preservation of biodiversity.

The processes implemented within the framework of this certification contribute to strengthening management over the Group's environmental risks.

# 2.1.6 Organization and Management of Information Systems (IS)

Contracting ownership for project implementation is divided between each of the branches and divisions for their scope while project management responsibilities are shared between these branches and divisions and the IT and Telecommunications Division which plays a role as cross-functional operator for EDF and the regulated subsidiaries.

Overall consistency is managed by the Group Information Systems Division which coordinates the Information Systems function through common strategies, IS governance being ensured at two levels in the

- strategic decisions and arbitrages are submitted, depending on their nature and the scope concerned, to one of EDF's decision-making Committees (see §2.1.1);
- other important decisions are taken by a committee of information systems executives representing the branches and divisions.

# 2.1.7 External controls

Like all listed companies, EDF is subject to the scrutiny of the French financial markets authority (Autorité des Marchés Financiers – AMF). In that it is majority controlled by the French State, EDF is also subject to control by the French public accounting institution (Cour des Comptes), the State controllers, the Inspectorate of Public Finances, the Commission for Economic Affairs of the French National Assembly and Senate and the Markets Commission

Pursuant to French law, the Statutory Auditors certify the annual financial statements (parent company and consolidated), carry out a limited review of the Group's summary consolidated half-year financial statements and comment on the annual report from the Chairman of the Board of Directors.

Owing to the nature of its business activities, EDF is also subject to control by the French Energy Regulation Commission (Commission de Régulation de l'Énergie - CRE) and by the French government department responsible for nuclear safety and radioprotection (Direction Générale de la Sûreté Nucléaire et de la Radioprotection – DGSNR).

The findings of these different external review bodies feed into the Group's internal control and audit programs.

# 2.2

# Risk management and control policy

The objectives of the risk management and control policy are to:

- enable the identification and ranking of risk in all areas in order to ensure their increasingly effective control, under the responsibility of the operating management;
- ensure that top executives and governance bodies within EDF have an aggregated and regularly-updated picture of the major risks and their level of control;
- contribute to securing the Group's strategic and financial trajectory;
- meet the expectations of external stakeholders and inform them of the Group's risks and the procedures for managing these risks.

The risk management scope comprises the activities of EDF and those of the controlled subsidiaries. Thus, it does not include the regulated and jointly-controlled subsidiaries and affiliates which are responsible for managing the risks within their respective scopes.

The risk control scope is that of the Group, with the exception of the Shareholdings. This control is exercised directly for the EDF scope and that of its controlled subsidiaries, or through the governance bodies of the regulated or jointly-controlled subsidiaries and affiliates.

As a general rule, the operating and functional entities are responsible for managing the risks which fall within their scope of activity. Risk control is ensured by a function which is entirely independent of the risk management functions (supplemented by specific control functions concerning, in particular, financial and energy market risks – see § 2.3.1.1). This function notably ensures a consistent approach to the identification, evaluation and control of risk. According to these principles, each half year, consistent with the reporting schedule for the Group's half-year consolidated financial statements, EDF updates the consolidated risk map of its major risks within the EDF scope and that of its controlled and jointly-controlled subsidiaries and affiliates (with the exception of Dalkia International). This consolidated risk map is based on mapping exercises established by each operating or functional entity using a common methodology (typology, identification and evaluation principles, risk control measures, etc.). Each risk identified must be the subject of a clear action plan. Responsibility for the major risks falls to a project leader appointed by the Top 4.

The consolidated risk map is submitted, each half-year, for approval by the Top 4 and presented to the Audit Committee of the EDF Board of Directors. It is also regularly reviewed by the executive management of the main contributing branches and divisions and by those involved in the risk control function.

The overall risk mapping procedures form the basis of a number of other procedures: the establishment of the audit program, the Insurance policy and its implementation, the financial documentation (notably the "Risk Factors" chapter of the AMF reference document), the analysis of risks involved in projects reviewed by EDF's decision-making bodies (Top 4, Commitments and Shareholdings Committee, CEP-fuel Committee, Upstream-Downstream and Trading Committee, etc.). The risk control process contributes, in particular, to securing the process for investments and long-term commitments in monitoring the respect of the methodology principles used for the risk analysis of projects submitted to the Commitments Committees.

In addition, EDF has a crisis management policy, the latest version of which was signed off by the Chairman and Chief Executive Officer in June 2005, which applies to the EDF scope and that of the controlled subsidiaries. It consists, notably, of:

- ensuring the existence of appropriate crisis management procedures, with regard to the risks encountered in each EDF branch, division and controlled subsidiary involved in managing the crisis;
- defining the procedures for cooperating with the regulated subsidiaries during crisis periods;
- verifying the overall consistency.

A program of crisis management exercises enables the effectiveness of these procedures to be regularly stress-tested and to capitalize on the experience gained. Finally, the crisis management organization is regularly readjusted to reflect any significant change in internal organization or the external environment, as well as in the light of feedback on any major crisis undergone.

# 2.3

# **Group control activities**

# 2.3.1 Control procedures relating to the implementation and optimization of operations

# 2.3.1.1 SECTOR POLICIES ON RISK CONTROL

# 2.3.1.1.1 CONTROL OF ENERGY MARKET RISK

The Chairman and Chief Executive Officer's decision of December 9, 2005, formalizing the policy on energy market risks, standardizes the management of these risks within the EDF scope and that of the controlled subsidiaries and stipulates the necessary procedures for its implementation and the control of its application. For the regulated and jointly-controlled subsidiaries and affiliates, the energy market risks policy and the control procedure are reviewed within the framework of the governance bodies of these companies (Board of Directors, Audit Committee). This policy document specifically outlines:

- the governance and assessment procedures, clearly separating the risk management from risk control responsibilities and enabling the tracking of exposure within the scope defined above;
- the risk control procedures involving the EDF executive management whenever risk limits are exceeded. Note that particularly rigorous risk control procedures are in operation at EDF Trading, given the specificity of the business activities and the fast reaction time required;
- the independence of the department responsible for controlling energy market risks, with a two-tier organizational structure, the entities ensuring operating control and the Group Energy Market Risk department within Corporate Risk Management ensuring a second level of control.

EDF's Audit Committee comments on the energy market risks policy and its development. The Top 4 approves the mandates for risk management in the entities annually when they are submitted to it along with the budget.

# 2.3.1.1.2 FINANCIAL RISK CONTROL

EDF has established a Financial Risk Control department, responsible for controlling interest rate, currency, cash flow and counterparty risk for EDF and the controlled subsidiaries.

This control is exercised through:

- the verification of the proper application of the financial risk management principles, notably through the regular calculation of the risk indicators and the tracking of risk limits;
- the execution of control missions methodology and organization within the EDF entities and the controlled subsidiaries;
- the operating control of EDF's trading room which is responsible for treasury management. For these activities, a system of indicators and risk limits, verified daily, is in place to track and control financial risk exposure. The Head of Group Treasury, the Head of the trading room and the Head of Financial Risk Control are involved in this and are expected to respond the moment a limit is exceeded. An ad hoc committee does spot checks on limit compliance and decides on any changes to specific limits.

A report on the implementation of financial risk management policies is made to the Audit Committee once a year. In July 2008, the Financial Risk Control department was transferred from the Corporate Finance, Finance & Treasury Division to the Corporate Risk Management Division in order to guarantee the independence of the structure for controlling financial risks vis-à-vis the activities responsible for managing these risks.

This department retains a functional link with the Corporate Finance, Finance and Treasury Division.

#### 2.3.1.2 SPECIFIC CONTROLS

#### 2.3.1.2.1 PROCEDURE FOR APPROVING COMMITMENTS

The Commitments and Shareholdings Committee, chaired by the Chief Financial Officer, reviews all of the Group's commitments, excluding those of the regulated subsidiaries and jointly-controlled affiliates, including investment projects, disposal projects and long-term "Fuel" contracts. It approves, except in exceptional cases, any investment involving sums in excess of €20 million. Since late March 2003, Committee meetings have been systematically preceded by a meeting involving experts at corporate level (Corporate Risk Management, Legal Affairs, Finance, Corporate Audit, etc.) in order to verify the comprehensive scope and the depth of the risk analysis on the projects submitted. This work is based

on a methodology reference framework for the analysis of the risks involved in development projects which takes into account the full impact of a project and, particularly, the evaluation of a number of stress scenarios.

#### 2.3.1.2.2 CONTROL OF INFORMATION SYSTEMS (IS)

#### ORGANIZATION OF THE INTERNAL CONTROL OF THE INFORMATION SYSTEMS

The Information Systems internal control procedure is an integral part of the Group's internal control policy (proposed control objectives to be deployed by the operating entities) and covers the implementation of the function's policies. These policies address, in particular, the security of information systems, the management of IS projects, the management of IS risk and the respect of the IT and Data protection legislation.

The Group's Information Systems and Corporate Audit Divisions jointly launched an assessment to test the robustness of the internal control procedure for EDF's Information Systems. The conclusions of this assessment were reported in mid-2008 and the recommendations focused on three main areas:

- strengthen EDF's Information Systems internal control reference framework in basing it on a recognized external framework: the COBIT. To this end, Information Systems established the control objectives in the Information Systems area which can be found in the 2008 internal control reference guide;
- create a network within internal control specific to Information Systems issues, reporting to Information Systems in liaison with the Corporate Audit Division:
- add to the management control procedures, in liaison with the Corporate Audit Division, in support of the management of the branches and functional divisions via the deployment of a specialized second level of control.

### MEASURES WITH REGARD TO IS SECURITY

The orientations and organization of IS security are defined in two reference documents: the EDF group Information Systems Security policy and the EDF Information Systems security reference framework. The application of these policies as well as the level of security are monitored quarterly by a security committee, chaired by the Group IS Division, which regroups the Heads of Information Systems security in all the EDF entities. The security committee reports annually to the committee of Information Systems executives.

# 2.3.1.2.3 ADMINISTRATION AND SUPERVISION OF SUBSIDIARIES/AFFILIATES

Each subsidiary or affiliate (with the exception of the regulated subsidiaries) reports to a top executive who is a member of the Executive Committee or to his or her delegated representative. This individual is responsible for proposing the Board directors who represent EDF within the governance bodies of these companies, to whom a letter of assignment is addressed outlining their remit and objectives. These assignments are updated each year by the Senior Executive Management Committee.

The Delegation of Board Directors and Companies, in place since 2002, particularly monitors:

- the updating of the mapping of company reporting lines, in the light of decisions taken by the Top 4;
- the tracking of "target composition profiles" which foresee the assembly of the necessary collective skills, as well as the profiles necessary to represent EDF effectively on the governance bodies of Subsidiary and Affiliate companies, in light of the strategy defined by the EDF senior executives to whom they report;
- compliance with the appointment process for Board directors, requiring prior management nomination (conformity with the target profile, control

- of the number of mandates, reporting line approval of the proposed Board director, etc.);
- the professional standards of new Board directors (initial training by the Corporate University, information via the internet site for the Board director community, on-going vocational training via seminars and Board directors' workshops).

# 2.3.1.3 OTHER CONTROL POLICIES

EDF has also defined:

- a health and safety policy, signed by the Chairman in October 2003;
- an insurance policy submitted to the Board of Directors on July 1, 2004, further to a report submitted to the Board directors on October 23, 2003, relating to "storm" risk cover for the distribution networks. The Board took note of the report on EDF's situation and that of the controlled subsidiaries with regard to identified insurable risks and on the cover in place. It approved an action program aimed at raising awareness of the Group's insurable risks, developing the scope of insurance to Group level, improving and optimizing existing cover and taking out new cover. With respect to the latter, on February 22, 2006, the Board approved (following comments from the Audit Committee of February 17) the implementation of a new "nuclear damage" program on April 1, 2006, aimed at covering any significant accidental damage which could impact EDF's nuclear fleet. A progress report on the implementation of the action program of July 1, 2004 was presented to the Audit Committee meetings of May 5, 2006 and April 2, 2007, which approved the future development lines. At the end of 2007, EDF commissioned an external consultant to undertake a comparison of the levels, scope and cost of covering EDF's risks with insurance or the transfer to the financial markets with those of other major comparable industrial groups. The conclusions of this study were presented to the Audit Committee meeting of June 25, 2008, along with the updated picture of insurable risks.

# 2.3.2 Control procedures relating to the reliability of financial information

#### 2.3.2.1 EDF GROUP FINANCIAL STATEMENTS

# 2.3.2.1.1 GROUP ACCOUNTING STANDARDS AND PRINCIPLES

The accounting standards used by the EDF group (1) are in line with international accounting standards (IFRS, IAS and interpretations) as approved by the European Union and applicable at December 31, 2008. The rules and accounting methods are described in the Group manual on accounting principles and summarized in the notes to the financial statements.

# 2.3.2.1.2 PROCEDURE FOR ESTABLISHING AND CONTROLLING THE CONSOLIDATED FINANCIAL STATEMENTS

The internal control policy in the accounting area was defined in 2007 by the Accounting Consolidation Department. It reiterates the objectives in terms of the reliability and compliance of the reported accounting information and for the preservation of assets and the prevention and detection of fraud. It concerns the monitoring of the accounting organization, the upstream processes enabling the population of accounting databases and the production process for accounting information, account closings and financial communication

<sup>1</sup> The scope of the Group's consolidated financial statements is detailed in the appendix to the financial statements.

The consolidated financial statements are drawn up by the Consolidation Department based on data input locally by each entity (entities of the parent company and subsidiaries and affiliates) and restated in line with Group standards according to a unique chart of accounts.

The annual financial statements are presented to the Audit Committee then closed by the Board of Directors and approved by the Shareholders' Meeting. The half-year consolidated summary financial statements are presented to the Audit Committee and the Board of Directors.

The closure of each half-year and annual accounting period gives rise to the establishment of a detailed plan of all the deliverables expected from each player involved in the publication of the financial statements and their analysis figuring in the financial statements, the management report and the reference document. Meetings between the branches and divisions within the parent company and the subsidiaries and affiliates prepare for each half-year or annual account closing, by planning for any changes in treatment and ensuring the reported financial and accounting information is reliable. Performance indicators are used to monitor respect of the deadlines and the quality of the information assembled. A retroactive analysis of the difficulties encountered during the production phase enables a steady improvement in the production process and the analysis of the consolidated financial statements.

The use of a financial language shared by Accounting and Financial Control contributes to the consistency of the Group's monitoring. This common language is one of the ways of ensuring continuity between:

- actual figures coming from accounting and the figures established in the forecasting phases;
- external financial communication and internal monitoring.

This common language promotes dialogue and cooperation between these two functions at all levels of the organization and contributes to securing the exchange of information between the players and the quality of the information produced.

Performance monitoring and the management dialogue are based on data produced under Group accounting standards as used for the reporting of the consolidated financial statements.

# 2.3.2.1.3 INTERNAL CONTROL ON THE QUALITY OF ACCOUNTING WITHIN THE GROUP

The accounting internal control policies are the responsibility of each of the Finance Departments in the Group companies.

# 2.3.2.2 EDF PARENT COMPANY FINANCIAL STATEMENTS

# 2.3.2.2.1 PRINCIPLES AND ACCOUNTING STANDARDS

The EDF parent company financial statements are established in accordance with French law. Accounting options compatible with international standards are prioritized whenever possible.

Thanks to a network of coordinators within the branches, the accounting translation of the Group's new activities as well as the impact of the transposition of new accounting standards or regulations is ensured.

# 2.3.2.2.2 PROCEDURE FOR ESTABLISHING AND CONTROLLING THE FINANCIAL STATEMENTS

The quality of accounting at branch or division level is guaranteed by a contractual relationship with the Accounting Consolidation Division. This contractual relationship involves, at each management level, annual certification at the close of a financial year, which provides a picture of the accounting quality and highlights improvements to be made in

the subsequent financial year. In addition, several audit missions entering into the scope of the accounting function and financial control are included in the Group's audit program. Thus, in 2008, audit missions were carried out on the "Employee payroll process", the "Financial Process – Customer Sales" and the "Control of the management of financial risks".

In addition to the parent company financial statements, pursuant to French law (1) EDF produces unbundled accounts for each activity: generation and distribution. These financial statements are established in line with the principles on unbundled accounting and recommendations made by the French Energy Regulation Commission (CRE). Based on these financial statements, EDF establishes unbundled financial statements for the Supply activity based on new criteria (supply to customers having exercised their eligibility – benefiting from new sales and marketing offers, supply to customers not having exercised their eligibility – maintained on the regulated tariff and gas supply). Following review by the Statutory Auditors, these financial statements were submitted to the French Energy Regulation Commission. The rules for establishing these financial statements must be commented on by the Competition Council prior to any announcement from the French Energy Regulation Commission as to their approval.

# 2.3.2.3 INTERNAL CONTROL ON THE QUALITY OF ACCOUNTING WITHIN THE EDF PARENT COMPANY

The internal control procedure for accounting has, since 2007, been an integral part of the Group's overall internal control framework. In effect, the Group's internal control reference guide has been enriched with control objectives for implementation by all the entities concerning the cross-functional processes which are upstream of accounting (sales, procurement, payroll, fixed assets, inventories, treasury, income tax and the production of accounts), as well as control objectives for implementation by the entities producing decentralized financial statements. This internal control reference guide is supported by a reference framework for the control of accounting quality used within EDF, enabling, via broad-based cross-functional processes, the measurement, using performance indicators, of the quality of the accounting information produced. It specifies, in particular, the criteria to be tested, the recommended sampling methods and the reporting to be provided. These measurement methods help, within the accounting area, to justify the self-appraisal realized by the entities since 2007.

The control procedures for accounting production aim to check, in particular:

- the precision and comprehensiveness of the accounting information;
- the correct valuation of assets and liabilities, notably by the appropriate level of provisions for depreciation and for risks;
- · the regular justification of accounting;
- the respect of the separation of financial years;
- the respect of legal obligations;
- the securing of the processes;
- the realization of inventories;
- the comprehensive taking into account of centralization operations.

The recommendations of the Guide relating to the application of internal control of reported accounting and financial information, defined by the French financial markets authority (Autorité des Marchés Financiers – AMF) at the beginning of 2007, have been taken into account in the internal control reference guide and in the internal control procedures of the central structures

<sup>1</sup> French law 2000-108 of February 10, 2000, modified by law 2004-803 of August 9, 2004 and law 2006-1537 of December 7, 2006.

for establishing the parent company and consolidated financial statements and in the functional structures contributing to reported financial information. Furthermore, in order to support the reasonable assurance of the quality of the reported financial statements, a process to identify the accounting at risk based on a number of different criteria (amounts and sensitivity) was carried out in 2007 and 2008. This enabled the verification of the proper adaptation between the identified accounts and the internal control framework in place. This work will be pursued in 2009 in order to take into account any changes with respect to accounting at risk.

#### 2.3.2.3.1 INTERNAL CONTROL OF 2008 ACCOUNTING

Given the increased industrial investment in the electricity generation fleet between 2007 and 2012 and the changes in standards and organization, the action to bolster the reliability of the investment accounting process begun in 2007 was pursued during the 2008 financial year.

Based on the financial security reference guide and within the framework of the strengthening of the internal control procedures for the accounting processes, audits on the risk of fraud were carried out in the branches with the support of the accounting entities.

# 2.3.2.3.2 ACTION PLAN FOR INTERNAL CONTROL OF ACCOUNTING

The verification of the adequacy of the control procedure within EDF will be pursued in 2009 within the framework of a joint approach involving accounting, financial control and internal audit. This control activity will also concern the Accounting Shared Services Center created on January 1, 2009 and attached to the Shared Services Division.

# 2.3.3 Control procedures relating to compliance with laws and regulations

The Legal Affairs Division has traditionally been responsible for keeping track of legislative and regulatory changes and for raising the awareness of any changes likely to have an impact for the Group within the branches and divisions concerned.

Pursuant to a decision of June 1, 2007, the Legal Affairs and Corporate Audit Divisions have adopted an action plan aimed at formalizing the role of Legal Affairs in defining the control objectives prescribed in the different EDF entities in order that their own internal control plans take these into account. These control objectives aim to ensure that these entities:

- indicate to Legal Affairs the areas of regulation which particularly concern them so that it can ensure its monitoring mission in an optimum manner;
- systematically involve Legal Affairs as early as possible in their strategic plans and major legal risks;
- ensure that their delegations of power reflect their organization, identify their needs in terms of legal awareness within the fields that concern them, including the transverse needs to be identified by Legal Affairs;
- ensure that individuals granted delegations of power have been trained by Legal Affairs in order to be able to guarantee respect, within their entity, of the laws and regulations which are considered to be "fundamental".

# 2.3.3.1 REGULATION RELATING TO THE INDUSTRIAL **OPERATIONS**

Numerous control procedures exist in industrial, and especially nuclear, operations: two authorities are particularly worthy of note:

- the Senior Vice President, Nuclear Safety (Inspecteur Général pour la Sûreté Nucléaire - IGSN) who, on behalf of the Chairman, ensures that all aspects of safety and radioprotection in the nuclear facilities are fully taken into account and whose annual report is published externally;
- the Nuclear Inspection, a service reporting directly to the Senior Vice President, Nuclear Operations, whose job is to regularly verify the level of safety in all the different Nuclear Operations Division entities.

The law of June 28, 2006 and its application decree dated February 23, 2007, relating to the securing of the financing of the nuclear charges requires the company to specify in a report the procedures and framework enabling the identification, evaluation, management and control of risks associated with the evaluation of the nuclear charge and the management of the assets to cover this. The first version of the report was finalized in June 2007 and updated in June 2008; this report includes a specific section on internal control.

In other areas (such as, for example, the monitoring of pressure vessels and of dams), each entity is responsible for defining and implementing the appropriate control procedures.

#### 2.3.3.2 OTHER REGULATIONS

Control procedures are also implemented for the application of regulations on working conditions, labor law and employee benefits.

The implementation of management systems, particularly with regard to environmental considerations (see §2.1.2.2) and Health and Safety, has enabled tighter control of compliance with regulations and compliance with any regulatory changes to be foreseen.

# 2.3.4 Control procedures relating the application of corporate management instructions and orientations

Within the framework of the deployment of the new Internal Control policy, a diagnostic of internal control by the Group's corporate management was conducted by the Corporate Audit Division as of 2006, focused particularly on the effective application of decisions taken by the Group's corporate management. This was reflected in the implementation of a procedure for monitoring decisions taken by the Chairman.

Since 2007, a formalized decision has specified the procedure for establishing, circulating and monitoring the decisions taken by the Chairman and Chief Executive Officer and the Chief Officers for the committees they chair. The control of their application is, respectively, the responsibility of the Head of the Chairman and Chief Executive Officer's office and the secretaries of the corresponding committees, and may be delegated to the Corporate Audit Division via, particularly, the audits in the annual program. The Corporate Audit Division includes a progress report on the implementation of these decisions in its half-year report.

# 2.4

# Communication and information dissemination

In addition to the communication and reporting initiatives outlined within this report, the following specific initiatives are worthy of note:

#### financial communication:

Since it was listed for trading in 2005, EDF has established procedures to prevent stock market transgressions. Hence a procedure has been defined to organize the respective roles within the Company with regard to the establishment, approval and dissemination of financial communication. A Disclosure Committee has been created, tasked principally with ensuring the validation and consistency of EDF's different financial communication sources as well as the review and validation of the contents of all financial communication channels. This committee, comprising representatives from the Finance, Communication and Legal Affairs Divisions, is chaired by the Chief Financial Officer. Furthermore, a financial market compliance charter has been established, whose aim is to raise awareness of the obligations in terms of financial communication and particularly to reiterate the insider trading rules and to foresee periods during which top executives and employees party to insider information may not trade in the Company's shares;

#### • the code of conduct:

Respect of the codes of conduct for the regulated subsidiaries is verified annually by the French Energy Regulation Commission, which publishes the results in its annual report;

#### · awareness of top executives:

In 2008 the initiatives begun in previous years were pursued. Thus the executive intranet, EDF Demain, available to EDF top executives and senior executives enables the information useful to these individuals to be shared, for example decisions taken by the Chairman and Chief Executive Officer, Group reference frameworks, information on current projects and language pointers relating to these projects.

A program of seminars is organized for top executives in order to familiarize them with important projects and major developments within the Group. The topics addressed in 2008 were the functioning of the energy markets, price formation and the EDF group's business model.

# 2.5

# Activities relating to the monitoring of Group internal control

There are three types of monitoring activities undertaken by the Corporate Audit Division:

- audits of the control of control procedures (mobilizing around 30% of Corporate Audit Division resources), and the other different categories of corporate audits (see §2.1.3.3) which take into account the risks, potential significant malfunctions or external recommendations (see §2.1.7);
- control of the implementation of recommendations arising from these audits through a formalized audit conclusion process, involving the management reporting lines and internal control coordinators of each entity concerned (see §2.1.3.3), the latter being responsible for ensuring the control of control procedures inside each of the entities within their scope;
- sharing feedback on experience and acting as a driver of continuous
  - half-year summaries from the Corporate Audit Division that highlight the salient points but also, as need be, the categories of malfunction recurring in several audits conducted during the period,
  - half-year reviews between the Corporate Audit Division and each management executive during which an analysis of internal control procedures is shared, but which also involve status reports on action plans initiated following previous audits, as well as future audit programs, enabling the link between audits, risk and internal control measures to be reinforced,

- qualitative analysis of annual self-appraisal reports by the specialized CI team within the Corporate Audit Division,
- upgrading of tools and reference frameworks such as, for example, the internal control reference guide and the specification of audits of internal control procedures following audits conducted during
- regular bi-monthly meetings of the Group's internal control coordinator network (around 45 individuals) facilitating, in particular, benchmarking and sharing of best practice,
- regular meetings between the Heads of Audit in the principal non-French subsidiaries and affiliates (notably EDF Energy, EDF Trading, EnBW and Edison) in order to share best practice and benchmarks, as well as common work to help the corporate managements of these companies strengthen their internal control procedures,
- regular meetings between the heads of audit teams within the branches (generation, customers, international operations and Group synergies, etc.) enabling, notably, the coordination of audit programs and practices, in line with the reference framework established by the Corporate Audit Division which defines the roles and responsibilities of the business line audit teams, together with the procedures for establishing their audit programs and for raising the professional standards of auditors,
- a three-yearly external audit of skills and processes implemented by the Corporate Audit Division within the framework of these different missions.

# 3. The dynamics of change

A number of changes in the Group's organization and modes of functioning have enabled it to clarify and strengthen the internal control procedures. Hence, the implementation of a financial and risk control process, the on-going deployment of our ethics policy, the drive to standardize and accelerate the establishment of the consolidated financial statements, the implementation of a new internal control policy which is continuously evolving to best meet the four key objectives recommended by the AMF (see introduction) are all part of the momentum of ongoing improvement. After the project launched in 2008 on the diagnostic of the effectiveness of the Information Systems Internal Control procedure

which will be pursued in 2009, the application of the decision of September 2008 relating to the effective adoption of high-quality internal control procedures in the governance processes of each of the Group's subsidiaries and affiliates represents a major strategic focus for 2009.

This report has been produced by a working group coordinated by the Corporate Audit Division, whose members were detailed in the introduction, and has been reviewed by, successively, the Disclosure Committee (February 4, 2009), the Chief Officers, the Audit Committee (February 10, 2009) and approved by the Board of Directors (February 11, 2009).

Paris, February 11, 2009

Chairman and Chief Executive Officer of EDF Pierre GADONNEIX

# Appendix B ÉLECTRICITÉ DE FRANCE SA

Statutory Auditors' Report prepared in accordance with Article L. 225-235 of French Commercial Code (Code de commerce), on the Report prepared by the Chairman of the Board of Directors of Électricité de France SA

Year ended December 31, 2008 Électricité de France SA 22-30, avenue de Wagram – 75008 Paris This is a free translation into English of a report issued in the French language and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

#### YEAR ENDED DECEMBER 31, 2008

To the Shareholders,

In our capacity as Statutory Auditors of Électricité de France SA, and in accordance with Article L. 225-235 of French Commercial Code (Code de commerce), we hereby report on the report prepared by the Chairman of your Company in accordance with Article L. 225-37 of French Commercial Code (Code de commerce) for the year ended December 31, 2008.

It is the Chairman's responsibility to prepare, and submit to the Board of Directors for approval, a report on the internal control and risk management procedures implemented by the Company and containing the other disclosures required by Article L. 225-37, particularly in terms of the corporate governance measures.

It is our responsibility:

- to report to you on the information contained in the Chairman of the Board of Directors' report in respect of the internal control procedures relating to the preparation and processing of the accounting and financial information;
- to attest that this report contains the other disclosures required by Article L. 225-37 of the French Commercial Code (Code de commerce), being specified that we are not responsible for verifying the fairness of these other disclosures.

We conducted our work in accordance with French professional standards.

# INFORMATION ON THE INTERNAL CONTROL PROCEDURES RELATING TO THE PREPARATION AND PROCESSING OF ACCOUNTING AND FINANCIAL INFORMATION

The professional standards require that we perform the necessary procedures to assess the fairness of the information provided in the Chairman's report in respect of the internal control procedures relating to the preparation and processing of the accounting and financial information. These procedures consist mainly in:

- obtaining an understanding of the internal control procedures relating to the preparation and processing of the accounting and financial information on which the information presented in the Chairman's report is based and existing documentation;
- obtaining an understanding of the work performed in the preparation of this information and existing documentation;
- · determining if any significant weaknesses in the internal control procedures relating to the preparation and processing of the accounting and financial information that we would have noted in the course of our engagement are properly disclosed in the Chairman's report.

On the basis of our work, we have nothing to report on the information in respect of the Company's internal control procedures relating to the preparation and processing of accounting and financial information contained in the report prepared by the Chairman of the Board in accordance with Article L. 225-37 of the French Commercial Code (Code de commerce).

# OTHER DISCLOSURES

We hereby attest that the Chairman's report includes the other disclosures required by Article L. 225-37 of the French Commercial Code (Code de commerce).

Paris La Défense and Neuilly-sur-Seine, February 11, 2009

The Statutory Auditors

**KPMG Audit** Department of KPMG SA Deloitte & Associés

Jean-Luc Decornoy Michel Piette Amadou Raimi Tristan Guerlain

# Appendix C

Mandates exercised by the Directors and the Chief Officers during the last five years (outside EDF)

# Appendix C

Mandates exercised by the Directors and the Chief Officers during the last five years (outside EDF)

Name	Current positions		Previous positions within the past five years		
	Company/Organization	Position	Company/Organization	Position	
Pierre Gadonneix	Transalpina di Energia	Chairman of the Board	Dalkia	Member of the	
		of Directors		Supervisory Board	
	Edison	Director	C3 SAS	Chairman	
	World Energy Council	Chairman			
	Electra Association	Chairman of the			
		Board of Directors			
	Economic and Social	Member			
	Council				
	National Foundation of	Member of the			
	Political Science	Board of Directors			
	Atomic Energy Committee	Member			
	Banque de France	Member of the			
		Advisory Council			
	EDF Diversiterre Foundation	Chairman of the Board			
		of Directors			
	Group'action CO <sub>2</sub> association				
		of Directors			
	Fondation européenne pour	Member of the Board of			
	les énergies de demain (FEED)	Directors			
	French Gas association	Member			
	National comittee on the	Member			
	sectors of vital importance				
	High Committee for	Member			
	Transparency and Information				
	about Nuclear Security				
Pierre-Marie Abadie	General division for energy	Director of energy	General division of energy	Director of energy markets	
	and climate at the Ministry of		and raw materials		
	Ecology, Energy, Sustainable				
	Development and Planning	Danuty Cayaramant			
	Areva NC Deputy Government commissioner				
	National Agency for	Government			
	Radioactive Waste	commissioner			
		Management			
André Aurengo	Nuclear medicine	Head of the Department	French Society of	Chairman	
Allule Auleligo	department at the	ricad of the Department	Radiation Protection (SFRP)	Chairnan	
	Pitié-Salpêtrière		radiation recetion (Srift)		
	Hospital				
	Faculty of medicine	Professor of biophysics			
	Pierre et Marie Curie				
	Medicine Academy	Member			
	High Council for	Member			
	Public Health	-			

		positions		within the past five years
Name	Company/Organization	Position	Company/Organization	Position
Bruno Bézard	Agence des Participations de l'Etat – (APE)	Chief Executive Officer	SNCF	Director
	Areva	Member of the		
		Supervisory Board		
	La Poste	Director		
	Air-France – KLM	Director		
	Strategic Investment Fund	Director		
	France Telecom	Director		
	Grand port maritime de	Member of Supervisory		
	Marseille	Board		
	Thalès	Director		
	Dexia	Director		
Yannick d'Escatha	Centre National	Chairman		
	d'Etudes Spaciales (CNES)		Ecole Polytechnique	Chairman of the Board
	Université de technologie de	Chairman of the Board of		of Directors
	Troyes	Directors		
	Académie des technologies	Member		
	Arianespace SA	Permanent representative of the CNES		
	Arianespace	Permanent representative		
	Participation	of the CNES		
	RATP	Director		
Philippe Josse	Ministry of Budget, Public	Director of the	Défense Conseil	Director
	Accounts and Public Service	National Budget	International	
			Société Nationale	Director
			Immobilière	
	Air France-KLM	Director		
	SNCF	Director		
Pierre Sellal	Foreign and European	General Secretary of	European Union	Permanent Representative
	Affairs Ministry	European Union as of		of France in Bruxels
		April 14, 2009.		
		Ambassador of France		
Frank E. Dangeard	Harcourt	Managing Partner	Eutelsat	Director
·	Calyon	Director	Orange	Director
	(Credit Agricole Group)		Thomson	Chairman of the
	Infogrammes Entertainment	Director		Board of Directors
	Symantec	Director	France Telecom	Deputy executive officer
	Moser Baer	Director		•
	Sonae	Director		

# Appendix C

Name	Company/Organization	positions Position		vithin the past five years  Position
Name Daniel Foundaulie			Company/Organization	FUSILIUII
Daniel Foundoulis	National Consumer Council	Member	_	_
	European Consumer	Member		
	Consultative	representing France		
	Group in Brussels	representing rrance		
	National Council of the	Vice-chairman		
	Secular Family Associations			
	(CNAFAL)			
	Conso France	Chairman		
Bruno Lafont	 Lafarge	CEO		
(as of May 20, 2008)	24.4.90	220		
Claude Moreau	SCI la Maison	Manager	Inter-Ministry Commission	Chairman
	de l'Industrie	3	for clean and energy	
	Pôle de compétitivité	Director	sparing vehicles	
	"Mobilité et transports			
	Avancés"			
Henri Proglio	Veolia Environnement	Chairman and Chief	Elior	Member of the
		Executive Officer		Supervisory Board
	Veolia Transport	Chairman of the Board	Sarp	Director
		of Directors	Thalès	Director
	Veolia Water	Chairman of the Board of	CNP Assurances	Member of the
		Directors		Supervisory Board
	Veolia Propreté	Chairman of the Board of	Veolia Environemtal	Director
		Directors	Services Asia	
	Dalkia	Member of the A and B	VES	Director
		Supervisory Boards	Casino Guichard Perrachon	Director
	Dalkia France	Chairman of the		
		Supervisory Board		
	Dalkia International	Director		
	Société des Eaux de	Director		
	Marseille			
	Sarp Industries	Director		
	Veolia Environmental	Director		
	Services Australia			
	Veolia Transport Australasia	Director		
	Veolia Environmental	Director		
	Services UK	D' .		
	Veolia Environmental	Director		
	Services North America	D' contra		
	Veolia Environmental	Director		
	Services North America			
	Operations Veolia Transport	Director		
		הוופכנטו		
	Northern Europe Veolia Eau	Manager		
	CNP Assurances	Director		
	Lagardère	Member of the		
	Lagardere	Supervisory Board		
	Natixis	Member of the		
	INGUAIS	Supervisory Board		
	Siram	Director		
	Caisse nationale des Caisses	Censor in the		
	d'Epargne	Supervisory Board		
	Dassault Aviation	Director		

	Curre	Current positions		Previous positions within the past five years	
Name	Company/Organization	Position	Company/Organization	Position	
Marie-Catherine Daguei	rre —	_	_	_	
Jacky Chorin	_	_	_	_	
Alexandre Grillat	_	_	_	_	
Philippe Pesteil	_	_	_	_	
Maxime Villota	_	_	_	_	
Jean-Paul Rignac	_	_	_	_	
Daniel Camus	Dalkia	Member of the	EDF Trading	Chairman of the	
		Supervisory Board	_	<b>Board of Directors</b>	
	EnBW	Member of the			
		Supervisory Board			
	EDF Energy UK	Chairman of the Board			
	3, 1	of Directors			
	EDF Energy	Chairman of the Board			
	23. 2.16.9)	of Directors			
	EDF International	Chairman of the			
	EDI International	Supervisory Board			
	EDF Energy Group	Chairman of the Board			
	Holdings	of Directors			
	Edison	Director			
	Lake Acquisitions limited	Manager			
	SGL Carbon	Member of the			
	3GL Carbon				
	Transalnina di Energia	Supervisory Board Director			
	Transalpina di Energia	Member of the			
	Morphosys				
Dominiano Longuela	Valeo	Supervisory Board Director			
Dominique Lagarde		Director  Member of the			
(since May 20, 2008)	ERDF				
	FDE To J'	Supervisory Board	EDE D' al account	Chairman Ciba B	
Jean-Louis Mathias	EDF Trading	Chairman of the Board	EDF Développement	Chairman of the Board	
	- W.	of Directors	Environnement	of Directors	
	Dalkia	Member of the			
		Supervisory Board			
	EDF Energies Nouvelles	Director			

# Appendix D

Information made available to the public by the EDF group during the last 12 months (Annual document prepared pursuant to Article 222-7 of the AMF general regulations)

#### ANNUAL DOCUMENT ESTABLISHED PURSUANT TO ARTICLE 222-7 OF THE AMF GENERAL REGULATIONS

Pursuant to Article 222-7 of the AMF General Regulations, the following table lists all the information which EDF made public since January 1, 2008, in order to satisfy the legal and regulatory obligations relating to financial instruments, financial instruments issuers and financial instruments markets.

#### Information published by EDF and available on the website of the French financial markets authority (AMF) (www.amf-france.org) and/or on the website of EDF (www.edf.fr)

dison signs a contract for the exploration of hydrocarbons in Iran  O1/c  DF Diversiterre: un nouveau statut pour la Fondation EDF  Vorld's leading nuclear operator set to invest in four new plants in the UK after positive Government announcement  O1/c  DF Energies Nouvelles poursuit son approvisionnement en modules photovoltaïques  O1/c  DF et l'Etat du Qatar engagent une coopération dans le domaine énergétique  e groupe ES, acteur majeur dans PEREN, réalise la plus importante installation de panneaux photovoltaïques en Alsace  O1/c  DF Energies Nouvelles signe un accord avec REH pour développer la technologie CETO utilisant l'énergie des vagues  O1/c  nBW and ewb give the go-ahead for the first geothermal power plant in Baden- Württemberg  O1/c  DF accueille le Docteur Pachauri, Prix Nobel de la Paix, à l'occasion de la remise des Trophées du Développement  lurable et annonce la création de la Fondation européenne pour les énergies de demain  O1/c	02/2008 09/2008 09/2008 10/2008 14/2008 14/2008 14/2008 15/2008 17/2008
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'DF vient de procéder avec succès à une émission obligataire d'un montant de 1.5 milliard d'euros 01/	
'énergie thermique à flamme: un atout essentiel dans le parc de production d'EDF pour répondre en temps	
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DF Energies Nouvelles enters strategic partnership with California-based Nanosolar 04/0	01/2008
DF's President and CEO, Pierre Gadonneix, welcomes Andris Piebalgs, member of the European Commission	
o the Chooz nuclear power station in the Ardennes	01/2008
he shareholders' meeting approves the 2007 Annual Report 04/0	02/2008
DF Chief Operating Officers appointed 04/0	03/2008
DF's Executive Committee appointed 04/0	08/2008
DF makes a commitment to the expansion of knowledge by creating the European Foundation for Tomorrow's	
	11/2008
e groupe EDF en Asie du Sud-Est : un engagement durable 04/	13/2008
	14/2008
<u> </u>	14/2008

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EDF Energies Nouvelles is set to launch construction of a 150 MW wind farm in California	04/17/2008
EDF Energies Nouvelles commissions 152 MW in capacity in Portugal	04/21/2008
EDF Energies Nouvelles signs an agreement to deliver a 99 MW wind farm in the United States during 2009	04/24/2008
La maison bas carbone récompensée au concours d'architecture organisé par EDF autour de l'efficacité énergétique	
et des énergies renouvelables	04/24/2008
EDF Energies Nouvelles has been selected to build five wind farms with 954 MW in total capacity in Canada	05/06/2008
Quarterly information: Q1 2008 sales of EUR 18.3 billion	05/07/2008
First-quarter 2008 revenues of EDF Energies Nouvelles: €139.3 million	05/07/2008
Figures for the 1st quarter of 2008: EnBW gets off to a good start in fiscal year 2008	05/09/2008
Edison's Board of Directors Reviews the Quarterly Report at March 31, 2008	05/13/2008
Standard & Poor's affirms Edison long terme rating at BBB+	05/21/2008
EDF Energies Nouvelles signs a power purchase agreement for a 100.5 MW wind project in the United States	05/29/2008
EDF Energies Nouvelles orders 300 MW in wind turbines from GE Energy in the United States for 2010	06/02/2008
EDF Energies Nouvelles and EDF Energy have announced the creation of a joint venture in the United Kingdom	06/05/2008
IGI Poseidon SA, the company that will realize the Italy-Greece natural gas pipeline, is born	06/11/2008
EDF: a sustainable commitment to sport	06/12/2008
EDF Energies Nouvelles is raising its stake in Fotosolar	06/13/2008
EDF Group European leader for tomorrow's energy	06/13/2008
EDF Energies Nouvelles is building one of the largest solar farm in France	06/16/2008
EDF signs an agreement with Gaz de France on the sale of its 25.5% stake in SPE, Belgium's second largest	
electricity producer and supplier	06/20/2008
La Fondation EDF Diversiterre s'engage pour la protection de la nature et de la biodiversité en signant quatre	
partenariats d'envergure	06/30/2008
EDF pushes ahead with the development of Dunkirk methane terminal	07/03/2008
EDF ready to build a new EPR nuclear reactor in France	07/03/2008
Fresh momentum for Edison in Greece: green light for the joint venture with Hellenic Petroleum	07/03/2008
EDF Energies Nouvelles commissions a new wind farm in the UK	07/04/2008
EDF Energies Nouvelles is commissioning one of the largest wind farms in France	07/08/2008
Le Ministère de l'Enseignement supérieur et de la Recherche et EDF signent une convention en faveur de la	_
maîtrise de la demande d'énergie	07/10/2008
EnBW's bid to acquire 26% of EWE AG is accepted	07/10/2008
EDF to develop tidal power	07/15/2008
Edison makes new significant gas discovery offshore Sicily	07/22/2008
EDF Energies Nouvelles secures building permits for two solar power plants (15.3 MWp) on Reunion Island	07/23/2008
Edison: sales revenues up 23.5% to over 5 billion euros	07/25/2008
EDF group and EXELTIUM finalise partnership agreement	07/31/2008
Information – Constellation Energy	07/31/2008
EDF group 2008 Half yearly Results	08/01/2008
EDF and CGNPC reached an agreement for the construction of 2 new nuclear reactors in China using EPR technology	08/10/2008
Information about Constellation Energy	08/13/2008
Below-inflation rise in retail electricity prices	08/14/2008
EDF Energies Nouvelles 2008 interim results: in line with the business plan	08/29/2008
Nomination à la Présidence du Conseil d'administration d'Electricité de Strasbourg, filiale d'EDF	09/03/2008
EDF Energies Nouvelles launches a €500 million capital increase with preferential subscription rights	09/04/2008
EDF increases its stake in the American power company Constellation Energy	09/09/2008
Communiqué de mise a disposition du prospectus ayant reçu le visa n° 08-175 délivré par l'Autorité des marchés financiers	09/11/2008
EDF's statement about Constellation Energy	09/22/2008
70 000 salariés ont souscrit à l'offre réservée aux salariés 2008	09/29/2008
EDF Trading acquires Eagle Energy Partners I, L.P.	09/29/2008
EDF Energies Nouvelles' shareholding structure following completion of the capital increase	09/30/2008
UniStar Nuclear Energy Submits License Application to NRC for Potential Third Nuclear Reactor at Nine Mile Point	10/01/2008
EDF partners the first major European apprenticeship meeting	10/01/2008
Partnership between Renault and EDF, objective: zero emissions	10/09/2008
EDF and PSA Peugeot Citroën Partner to Support Development of Electric Vehicles and Plug-In Hybrids	10/09/2008
Information – Constellation Energy	10/15/2008
Ocean energy: a new source of renewable energy for safe, CO <sub>2</sub> -free electricity production	10/17/2008
EDF appoints OpenHydro to install the first series of underwater tidal turbines in Brittany	10/17/2008
2nd Energy Day – the EDF group is looking to meet its future engineers Over 1,000 students expected at the Stade de France	10/21/2008
FDF and the second seco	
EDF group appointments EDF acquires a majority holding in British North Sea gas fields from ATP Oil & Gas Corporation	10/23/2008 10/27/2008

### Appendix D

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EDF Energies Nouvelles commissions 26 MW in the United Kingdom	10/29/2008
EDF pre-empts the implementation of new payment terms for its suppliers	10/31/2008
EDF, acteur responsable de la gestion des déchets issus de la production d'énergie nucléaire	10/31/2008
L'énergie thermique à flamme : un atout essentiel dans le parc de production d'EDF pour répondre en temps réel aux pointes	11/01/2000
de consommation d'électricité	11/01/2008
EDF Energies Nouvelles orders an additional 75 MWp in photovoltaic panels from First Solar  EDF Energies Nouvelles signs close to 1,000 MW of new operations & maintenance contracts in the United States	11/04/2008
EDF Energies Nouvelles – 9-month 2008 revenues: €628.6 million	11/05/2008
Christian Buchel appointed Chief Operating Officer of EnBW	11/06/2008
EDF group's sales at 30 September 2008: EUR 45.6 billion, representing organic growth (excluding scope and	11/00/2008
exchange rate effects) of +9.7%	11/12/2008
EDF confirms its stated timetable for the start of operations at the Flamanville EPR nuclear reactor	11/12/2008
The Board of Directors Reviews the Quarterly Report at September 30, 2008	11/12/2008
Quarterly financial results for January – September 2008: EnBW's earnings power continues to be satisfactory	11/13/2008
EDF continues to step up its power generating capacity in France	11/14/2008
EDF prend connaissance avec satisfaction des mesures annoncées en faveur du développement des énergies	11/11/2000
renouvelables dans le cadre du Grenelle de l'Environnement	11/17/2008
EDF: €2 billion successful bond issue	11/19/2008
Auctions: 500 MW of electricity sold to alternative suppliers	11/20/2008
EDF: distribution of an interim dividend of €0.64 per share	11/21/2008
EDF invests to boost electric generation resources in Alsace	11/21/2008
EDF lance son nouveau site Internet pour les jeunes	11/25/2008
EDF Energies Nouvelles commissions a 70 MW wind farm in Italy	11/27/2008
EDF: 1 Billion Swiss Francs successful bond issue	11/28/2008
Ventominho 240 MW – Portugal: EDF Energies Nouvelles commissions Europe's largest onshore wind farm	12/02/2008
EDF proposes to acquire 50% of Constellation Energy's nuclear generation and operation business for US\$4.5 billion	12/03/2008
EDF Energies Nouvelles commissions 52 MW in France	12/04/2008
EDF Energies Nouvelles establishes a position in Turkey by acquiring a 50% interest in Polat Enerji	12/08/2008
Constellation Energy and EDF group Enter Definitive Investment Agreement	12/17/2008
EDF Energies Nouvelles opens France's largest solar power plant	12/18/2008
EDF s'inscrit dans les recommandations AFEPIMEDEF	12/19/2008
AREVA and EDF create long-term used fuel management partnership	12/19/2008
European Commission: statement of objections	12/24/2008
Drop in temperatures: EDF is mobilising all available generation resources	01/06/2009
Combined company will build "on unrivalled experience of EDF and British Energy"	01/09/2009
EDF Energies Nouvelles is commissioning a new 100.5 MW wind farm in the United States	01/14/2009
Closing of agreement among Edison, Egyptian Government and EGPC for the hydrocarbons of Abu Qir in Egypt	01/15/2009
EDF is financing the majority of its investment in new Swiss energy company ALPIQ Holding SA through a contribution in kind	01/16/2009
EDF: successful launch of two bonds for a total amount of 4 billion euros	01/16/2009
Emission obligataire d'EDF	01/21/2009
EDF issues USD 5 billion of bonds	01/22/2009
Tempête dans le Sud-Ouest	01/24/2009
New gas discover in Algeria	01/26/2009
EDF Energy welcomes government announcement on nuclear sites	01/27/2009
Construction of a second EPR in France	01/30/2009
Building the 1st EPR (European Pressurised water Reactor) in France at Flamanville	02/06/2009
Preliminary business figures for 2008: EnBW operations continue to perform well	02/10/2009
EDF Energies Nouvelles: Strong increase in 2008 full-year results, targets exceeded	02/11/2009
EDF group: Annual Results 2008	02/12/2009
EDF Energy announces electricity price cut	02/13/2009
Joining EDF European leader for tomorrow's energy	02/18/2009
EDF and ENEL seal an industrial partnership for the development of nuclear energy in Italy at the Franco-Italian summit	02/24/2009
EDF continues its commitment to working with disabled people	02/25/2009
EnBW and EWE apply for extension of the antitrust investigation period	02/26/2009
EnBW and Borusan plan strategic partnership in Turkey	03/03/2009
EDF and Toyota announce large-scale demonstration of Plug-in Hybrid Vehicles in Strasbourg, France	03/18/2009
EDF met en place un CESU dédié à la petite enfance en présence de Laurent Wauquiez	03/24/2009
Information about EDF Energies Nouvelles interest in the Silicium de Provence project	04/07/2009
Information relative au relèvement provisoire des fonctions de Pierre François et Pascal Durieux	04/10/2009

#### Information registered by EDF with the Greffe of the Paris Commercial Court (date of registration)

Information	Date
Extract – Minutes of the Shareholder's meeting (December 20, 2007)	03/07/2008
Extract – Minutes of the Shareholder's meeting (May 20, 2008)	08/18/2008
Extract – Minutes of the Board of Directors (April 3, 2008)	08/18/2008

#### Information published by EDF in the Bulletin des Annonces Légales Obligatoires ("BALO") and available on the BALO website (www.balo.journal-officiel.gouv.fr)

Information	Date
Notice of a bond issue for a nominal amount of €1.5 billion	02/04/2008
2007 consolidated annual sales of the Group	02/15/2008
Convocation to the May 20, 2008 Shareholders' Meeting	03/10/2008
Convocation to the May 20, 2008 Shareholders' Meeting	04/21/2008
2007 consolidated annual financial statements of the Group	04/23/2008
Sales for the first quarter of 2008	05/14/2008
Sales for the first quarter of 2008 – correction	05/21/2008
Notice of a bond issue for a nominal amount of €600,000,000	05/30/2008
Notice of a bond issue for a nominal amount of €1,200,000,000	05/30/2008
Notice of a bond issue for a nominal amount of £500,000,000	05/30/2008
Approval of the 2007 annual financial statements by the Shareholders' Meeting of May 20, 2008	07/07/2008
Sales for the first half of 2008	08/15/2008
Convocation to the May 20, 2009 Shareholders' Meeting	03/06/2009

#### Information published by EDF abroad

Information	Publication	Date
Consolidated annual results 2007	International daily press	02/20/2008
Consolidated annual results 2008	International daily press	02/12/2009

#### **Financial publications**

Information	Publication	Date
Consolidated annual results 2007	EDF group website (www.edf.fr) `	02/20/2008
	Press release on the AMF website (www.amf-france.org)	
	Press conference	
	Presentation to analysts	
	National daily press	02/20/2008
	Financial websites	
Consolidated financial statements as of December 31, 2007	EDF group website (www.edf.fr)	02/27/2008
Consolidated half-year results 2008	EDF group website (www.edf.fr) `	08/01/2008
	Press conference	
	Presentation to analysts	
	National daily press	08/01/2008
	Financial websites	
Consolidated annual results 2008	EDF group website (www.edf.fr) `	02/12/2009
	Press conference	
	Presentation to analysts	
	National daily press	02/12/2009
	Financial websites	
Consolidated financial statements as of December 31, 2008	EDF group website (www.edf.fr)	02/12/2009

#### Information available to EDF shareholders as part of the Shareholders' Meetings

Information	Date
Invitation to the Shareholder's meeting	Shareholder's meeting on May 20, 2008
The text of the resolutions and summary of the Group's activity	Shareholder's meeting on May 20, 2008
The guide to the General meeting	Shareholder's meeting on May 20, 2008
Annual Report	Shareholder's meeting on May 20, 2008

### Documents published as part of the initial public offering and available on the website of the French financial markets authority (AMF) (www.amf-france.org)

Information	Date
2007 Document de référence	04/14/2008
Prospectus de base	05/16/2008
2007 Document de Référence update	08/26/2008
Rights issue to employees	08/26/2008
Prospectus supplement	09/18/2008
Prospectus supplement	11/13/2008
Prospectus supplement	12/05/2008
Prospectus supplement	01/14/2009

# Appendix E EDF GROUP

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### **Income statements**

(in millions of Euros)	Notes	200	08	20	07
Sales of goods (1)			26,707		21,929
Sales of services (2)			12,296		11,709
SALES	4		39.003		33,638
Change in inventories and work-in-progress			48		123
Capitalized production			315		276
Operating subsidies	5		1,874		2,002
Reversals of provisions, amortization and depreciation	6		5,592		3,825
Transfers of charges			101		86
Other operating income	7		1,034		535
I - TOTAL OPERATING INCOME			47,967		40,485
Purchases and other external expenses	8		31,060		24,473
Fuel purchases used - power generation		2,457		2,671	-
Energy purchases		9,495		5,567	
Other purchases used		3,227		947	
Services		15,881		15,288	
Taxes other than income taxes	9		2,360	•	2,168
Based on salaries and wages		110		98	
Energy-related		882		669	
Other		1,368		1,401	
Personnel expenses	10		5,095		4,677
Salaries and wages		3,178		2,940	
Social contributions		1,917		1,737	
Depreciation, amortization and provisions			4,576		3,899
Depreciation and amortization on fixed assets	11	1,742		1,722	
Provisions for depreciation on fixed assets	12	136		63	
Provisions for depreciation on current assets	12	122		92	
Provisions for risks and expenses	12	2,576		2,022	
Other operating expenses	13		1,444		817
II - TOTAL OPERATING EXPENSES			44,535		36,034
OPERATING PROFIT (I - II)			3,432		4,451
Joint operations					
III - Profit assigned or loss transferred			11		27
IV - Loss charged or profit transferred			2		3
Financial income					
Income from investments			1,572		661
Income from other securities and receivables related to fixed assets			644		599
Interest and similar income			556		517
Reversals of provisions and transfers of charges			373		1,824
Foreign exchange gains			1,751		854
Net income on sales of marketable securities			75		172
V - TOTAL FINANCIAL INCOME			4,971		4,627
Financial amortization and provisions			4,781		2,351
Interest and similar expenses			1,520		1,129
Foreign exchange losses			1,797		916
Net charges on sales of marketable securities			30		12
VI - TOTAL FINANCIAL EXPENSES			8,128		4,408
FINANCIAL RESULT (V - VI)	14		(3,157)		219
PROFIT OR LOSS BEFORE INCOME TAXES AND EXCEPTIONAL ITEMS (I - II + III - IV + V - VI)			284		4,694
Exceptional income on capital transactions			365		5,116
Reversals of depreciation, amortization and provisions and transfers of charges			536		1,128
VII - TOTAL EXCEPTIONAL INCOME			901		6,244
Exceptional charges on capital transactions:			199		4,572
- Book values of real estate and financial assets sold		186		4,572	
- Other		13			
Exceptional depreciation, amortization and provisions:			465		597
- Allocation to tax regulated reserves		264		213	
- Depreciation, amortization and provisions		201		384	
VIII - TOTAL EXCEPTIONAL EXPENSES			664		5,169
EXCEPTIONAL RESULT (VII - VIII)	15		237		1,075
IX - Income taxes	16		(346)		835
Total income (I + III + V + VII)			53,850		51,383
Total expenses (II + IV + VI + VIII + IX)			52,983		46,449
NET INCOME			867		4,934

<sup>(1)</sup> Production of goods for export in 2008:  $\leqslant$  5,729 million.

<sup>(2)</sup> Production of services for export in 2008: €188 million.

### **Balance sheets**

			12.31.2008		12.31.2007
ACCETC	Notes	Gross	Depreciation	Net	Net
ASSETS (in millions of Euros)		values	or provisions	values	values
Fixed assets					
Intangible assets	17,18	1,047	257	790	446
Property, plant and equipment owned by EDF	17,18				
Land		130	10	120	125
Buildings		8,906	5,715	3,191	3,261
Technical installations, plant and machinery, equipment and fixt	ures	54,891	36,669	18,222	18,345
Other tangible assets		984	685	299	286
Sub-total Property, plant and equipment owned by EDF		64,911	43,079	21,832	22,017
Property, plant and equipment operated under concession:	17,18				
Land		37	-	37	36
Buildings		8,374	5,075	3,299	3,394
Technical installations, plant and machinery, equipment and fixt	ures	2,740	1,396	1,344	1,292
Other tangible assets		11	9	2	1
Sub-total Property, plant and equipment		11,162	6,480	4,682	4,723
Tangible assets in progress:	17				
Work-in-progress		3,078	-	3,078	2,148
Advances		739	-	739	401
Sub-total Tangible assets in progress		3,817	-	3,817	2,549
Intangible assets in progress	17	500	-	500	332
Investments:	19-22				
Investments and related receivables		35,662	925	34,737	30,009
Investment securities		9,887	1,635	8,252	8,016
Loans and other financial assets		7,440	12	7,428	10,642
Sub-total Investments		52,989	2,572	50,417	48,667
TOTAL I - FIXED ASSETS		134,426	52,388	82,038	78,734
Current assets					
Inventories, including work-in-progress	21				
Raw materials		6,817	13	6,804	6,493
Other supplies		613	145	468	435
Work-in-progress and other		25		25	17
Sub-total Inventories and work-in-progress		7,455	158	7,297	6,945
Advances on orders	22	629	_	629	412
Trade and other receivables	22				
Trade receivables and related accounts		11,422	174	11,248	10,273
Other receivables		5,929	4	5,925	3,121
Sub-total Trade and other receivables		17,351	178	17,173	13,394
Marketable securities	23-24	7,796	129	7,667	8,456
Cash instruments	22	399		399	59
Cash and cash equivalents	24	586		586	913
Prepaid expenses	22	812	_	812	454
Sub-total Other current assets	<b></b>	9,593	129	9,464	9,882
TOTAL II - CURRENT ASSETS		35,028	465	34,563	30,633
Other assets		33,020		<del>- 5-1,505</del>	
Deferred charges (III)		28		28	13
Bond redemption premiums (IV)		82	27	55	34
Unrealized foreign exchange losses (V)	25	513	21	513	35
	25		F2.990		
TOTAL ASSETS (I + II + III + IV + V)		170,077	52,880	117,197	109,449

EQUITY AND LIABILITIES (in millions of Euros)	Notes	12.31.2008	12.31.2007
Equity and concession accounts			
Capital		911	911
Capital-related premiums			
Share issue premium		6,110	6,110
Merger premium		25	25
Revaluation surplus:			
Special reserves - Law of December 28, 1959		631	631
Tax-regulated reserves - Law of December 29, 1976		16	17
Tax-regulated reserves			
Legal reserves		91	91
Retained earnings		6,913	4,232
Profit or loss for the financial year		867	4,934
Interim dividend		(1,166)	(1,057)
Investment subsidies		55	47
Tax-regulated provisions:			
Provisions related to depreciable fixed assets (Law of December 30, 1977)		18	20
Additional depreciation recognised for tax purposes		7,089	7,177
Sub-total Equity	26	21,560	23,138
Special concession accounts	27	2,038	2,049
TOTAL I - EQUITY AND CONCESSION ACCOUNTS		23,598	25,187
Provisions for risks and expenses		•	•
Provisions for risks	28	778	366
Provisions for expenses:	<u> </u>		
Renewal of facilities operated under concession	31	202	197
Back-end nuclear cycle	29	14,711	16,660
Decommissioning and last cores	29	12,469	12,095
Employee benefits	30	9,518	9,679
Other expenses	32	2,352	1,724
TOTAL II - PROVISIONS FOR RISKS AND EXPENSES		40,030	40,721
Liabilities			
Financial liabilities:	33-34		
Bonds		3,679	3,727
Other borrowings		16,873	11,147
Sub-total Bonds and borrowings (1)		20,552	14,874
Advances received on consumption		158	152
Other debts		914	808
Sub-total Financial liabilities (2)		21,624	15,834
Advances and payments on account received	33	3,765	3,330
Operating, investment and other liabilities	33		
Trade payables and related accounts		10,226	7,035
Tax and social security debts payable		4,999	4,364
Debts related to fixed assets and related accounts		1,448	859
Other liabilities		7,056	8,019
Sub-total Operating, investment and other liabilities		23,729	20,277
Cash instruments	33	438	229
Deferred income	33	3,796	3,712
TOTAL III - LIABILITIES <sup>(3)</sup>		53,352	43,382
Other liabilities			
Unrealized foreign exchange gains (IV)	25	217	159
TOTAL EQUITY AND LIABILITIES (I + II + III + IV)		117,197	109,449
ויד וויד וויד וויד וויד וויד וויד וויד		117,137	105,445

<sup>(1) €15,901</sup> million in Euros and € 4,651 million in other currencies.

<sup>(2)</sup> Including  $\leq$  41 million of bank overdrafts.

<sup>(3)</sup> Including  $\in$  18,541 million of debts due in more than one year.

#### **Cash flow statements**

(in millions of Euros)		2008	2007
Operating activities:			
Profit / (loss) before income tax		521	5,769
Amortization, depreciation and provisions		3,294	260
Capital (gains) / losses		(139)	(441)
Financial (income) and expenses		(1,206)	(795)
Changes in working capital		664	(381)
Cash flows from operations		3,134	4,412
Net financial expenses, including dividends		2,142	653
Income taxes paid		(952)	(1,392)
Net cash flows from operating activities	(A)	4,324	3,673
Investing activities:			
Purchases of property, plant and equipment and intangible assets		(2,492)	(2,103)
Sales of property, plant and equipment and intangible assets		76	233
Changes in financial assets		(6,307)	2,386
Net cash flows used in investing activities	(B)	(8,723)	516
Financing activities			
Issuance of borrowings and underwriting agreements		10,324	4,869
Repayment of borrowings		(2,264)	(4,735)
Dividends paid		(2,437)	(3,171)
Increase in special concession accounts		15	12
Investment subsidies		16	3
Net cash flows from financing activities	(C)	5,654	(3,022)
Net increase / (decrease) in cash and cash equivalents	(A) + (B) + (C)	1,255	1,167
Cash and cash equivalents - opening balance*		(807)	(417)
Effect of currency fluctuations		(98)	1
Cash transferred to ERDF		0	(1,491)
Financial income on cash and cash equivalents		10	(67)
CASH AND CASH EQUIVALENTS - CLOSING BALANCE*		360	(807)

<sup>\* &</sup>quot;Cash and cash equivalents – opening balance" and "Cash and cash equivalents – closing balance" do not include investment funds nor negotiable debt instruments maturing in more than three months. Details of the variation in cash and cash equivalents are presented in note 24.

#### Notes to the financial statements

Électricité de France SA (EDF) is an electricity and gas generation and supply operator. EDF also covers all the business activities of Island Energy Systems: IES (located in Corsica and France's overseas departments).

### Note

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### **Accounting policies**

EDF's annual financial statements are prepared in accordance with the accounting principles and methods defined by the French national chart of accounts, as presented by CRC (French accounting committee) regulation 99-03 of April 29, 1999 with additions in subsequent regulations.

### Change in accounting method

### Treasury shares purchased for attribution to employees

In application of the French National Accounting Council opinion 2008-17 of November 6, 2008 relating to the accounting treatment to be used for stock option or share subscription plans and free share plans for employees, treasury shares purchases in relation with free share plan attributed to employees are no longer impaired based on market price and accruals recorded for the outflow of resources inherent to an employee share plan are now determined based on services already rendered by the employee.

As a result of this change, EDF has reversed the portion of the provision and income receivable from subsidiaries recorded at December 31, 2007 for the 2008-2009 period, amounting to €75 million (net of taxes), through equity.

#### Valuation of investments sold

Following instruction 4 B-1-08 issued by the French tax authorities on April 4, 2008 regarding the determination of the cost price of investments sold, the cost of such investments is now measured by the FIFO (first in, first out) method instead of the weighted average cost method.

### 1.3

### **Management estimates**

The preparation of its financial statements requires management to make its best estimates and to use assumptions that affect the book value of assets and liabilities, information on contingent assets and liabilities, and

the book value of income and expenses recorded for the period. The figures in future financial statements may differ from current estimates due to changes in these assumptions or economic conditions.

### **Sales**

Sales essentially comprise of income from the sale of energy and services, which mainly include services for delivery through the energy distribution network purchased from the subsidiary ERDF and reinvoiced to endcustomers.

EDF accounts for sales when:

- a contract exists:
- delivery has taken place (or the service provided);
- a quantifiable price has been established or can be determined;
- and the receivables are likely to be recovered.

Delivery takes place when the risks and benefits associated with ownership are transferred to the buyer.

The quantities of energy delivered but not yet measured or billed at the end of the period are calculated based on the quantities used by the sites of the EDF balance responsible entities less the quantities billed, after losses measured by a statistical method presented to the Commission de Régulation de l'Énergie (CRE), the French Energy Regulator. These quantities are valued using an average price determined in reference to energy invoiced in the previous month.

Sales of goods and revenues on services not completed at the balance sheet date are valued by reference to the stage of completion at the balance sheet date.

Sales of energy to EDF Trading, the Group's trading company, are recorded at their contractually stipulated amount.

### **Intangible assets**

Intangible assets mainly consist of software, concession rights, licenses, trademarks and similar rights, operating rights, development costs, storage capacity reservation costs, and greenhouse gas emission quotas.

Development costs are recognized as an intangible asset if EDF can demon-

• the technical feasibility of making the intangible asset ready for commissioning or sale;

- its intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset;
- how the intangible asset will generate likely future economic benefits;
- the availability of the appropriate resources (technical, financial or other) to complete development and use or sell the intangible asset;
- its ability to provide a reliable estimate of expenses attributable to the intangible asset during its development.

Research expenses are recognized as expenses in the financial period incurred.

In application of ruling 2004-330 of April 14, 2004, since January 1, 2005 the French State has attributed energy operators a fixed quantity of quotas representing one tonne of carbon dioxide equivalent each for a specified

In compliance with the CNC (French National Accounting Council) opinion 2004-C issued on March 23, 2004, greenhouse gas emission quotas are recorded as intangible assets at their market value at the date of registration in the SERINGAS register managed by the Caisse des Dépôts et Consignations, with an offsetting entry under "Other liabilities".

Intangible assets other than greenhouse gas emission quotas are amortized on a straight-line basis over their useful lives regardless of whether they are generated in-house or purchased.

### 1.6

### Property, plant and equipment

Property, plant and equipment are recorded at acquisition or production cost or at their revalued amount where applicable, less accumulated depreciation and provisions:

- cost corresponds to acquisition or production cost (including external costs as well as costs incurred directly by EDF);
- the revaluations were performed in accordance with French legislation (Law of December 28, 1959 for fixed assets put into service before January 1, 1960 and specific legislation issued for those put into service before January 1, 1977).

The cost of facilities developed in-house includes all labor and materials costs, and all other production costs attributable to the construction cost of the asset.

Assets associated with provisions:

In application of CRC regulation 2000-06 on liabilities, confirmed by Emergency Committee regulation 2005-H, certain assets have been recognized in connection with provisions for liabilities related to decommissioning of nuclear and fossil-fired power plants and the provision for last cores.

At the date of commissioning, these assets are carried in property, plant and equipment, and are measured and recorded in the same way as the corresponding provision.

They are depreciated in the same way and over the same useful life as the relevant facility.

The asset ceases to be recognized when the associated facility has been totally depreciated.

Pre-operating expenses and borrowing costs incurred to finance installations are recognized as expenses.

EDF's property, plant and equipment comprise both assets owned by EDF and assets operated under concession.

### 1.6.1 Property, plant and equipment owned by EDF

Most of the property, plant and equipment owned by EDF concern nuclear

The following components are included in the balance sheet value of nuclear power plants currently in service:

- the discounted cost of decommissioning the facilities;
- the discounted cost of last core nuclear fuel, including depreciation of residual reactor fuel that will not be fully irradiated when production shuts down, the cost of nuclear fuel reprocessing and the cost of removing and storing waste from these operations.

Strategic safety spare parts for nuclear facilities are treated as property, plant and equipment, and depreciated over the residual useful life of the last unit of the series to which they are assigned.

Impairment is booked in respect of certain temporarily closed down nonnuclear plants, when it is unlikely that they will ever be brought back into

### 1.6.2 Property, plant and equipment operated under concession

In France, EDF is the operator for two types of public service concessions:

- Public distribution facilities operated under concession rights licensed by local authorities (municipalities or syndicated municipalities);
- Hydropower concessions with the French State as grantor.

#### 1.6.2.1 PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS

Since the enactment of the French Law of April 8, 1946, EDF has been by law the sole operator for the main public distribution concessions in France.

In application of the French Law 2006-1537 of December 7, 2006 on the energy sector, EDF transferred its distribution business for mainland France to the newly-created subsidiary ERDF on January 1, 2007. Since that date, the

#### **Financial** statements

only public distribution networks for which EDF is the concession operator are the island networks located in Corsica and France's overseas departments.

The accounting treatment of concessions is based on the concession agreements, with particular reference to their special clauses. These contracts generally use standard concession rules deriving from the 1992 Framework Contract negotiated with the National Federation of Licensing Authorities (Fédération Nationale des Collectivités Concédantes et Régies – FNCCR) and approved by the public authorities.

All assets used under concessions are reported in the balance sheet assets as property, plant and equipment operated under concession, regardless of their initial financing, with recognition of a liability corresponding to any assets supplied for nil consideration by concession grantors.

These items of property, plant and equipment are stated at cost less accumulated depreciation, and amortized on a straight-line basis over the estimated useful life.

#### 1.6.2.2 HYDROPOWER CONCESSIONS

Hydropower concessions follow standard rules approved by decree.

Assets attributed to the hydropower concessions comprise hydropower generation equipment (dams, pipes, turbines, etc.) and, in the case of recently-renewed concessions, also include electricity generation and switching facilities (alternators, etc.).

The concession assets are recorded under property, plant and equipment operated under concession. These items of property, plant and equipment are stated at cost less accumulated depreciation. Depreciation is calculated over their useful life, which is generally identical to the term of the concession.

Recent changes in the regulations following the removal of the outgoing operator's preferential right when a concession is renewed will lead to changes in estimates that will be used in the financial statements for 2009.

#### 1.6.3 Depreciation

Property, plant and equipment are depreciated on a straight-line basis.

The estimated useful lives for the principal facilities are the following:

- Hydroelectric dams 75 years
- Electromechanical equipment used in hydropower plants 50 years
- Fossil-fired power plants 30 to 45 years
- Nuclear power plants 40 years
- Distribution installations (lines, substations) 20 to 45 years

### Long-term asset impairment

At the year-end and at each interim reporting date, EDF assesses whether there is any indication that an asset could have been significantly impaired. If so, an impairment test is carried out as follows:

- EDF measures any long-term asset impairment by comparing the carrying value of these assets, classified into cash-generating units where necessary, and their recoverable amount, usually determined using the discounted future cash flow method;
- the discount rates used for these purposes are based on the weighted average cost of capital for each asset or group of assets concerned;
- future cash flows are based on medium-term plan projections.

This impairment test is based on business plans and assumptions approved by the management.

### 1.8

#### **Financial assets**

#### 1.8.1 Investments

Investments are carried at cost, except for certain investments acquired before January 1, 1977 which were revalued, replacing the original cost by the fair value at the end of 1976 if the fair value was higher.

Gains and losses on sales of investments are valued using the FIFO (first in, first out) method

In accordance with the Emergency Committee opinion n° 2007C of June 15, 2007, transfer duties, fees and commissions and legal fees related to acquisitions of investments are included in the cost of acquisition of the asset. This concerns shares governed by article 39.1.5 of the French Tax Code. Expenses of this type relating to other shares are included in expenses. Tax-regulated amortization of acquisition costs is recorded in an excess depreciation account.

When the book value of investments is higher than their value in use, a provision is generally recorded to cover the difference.

The value in use of listed securities in non-consolidated entities is based on stock market price.

For unlisted and listed securities in companies included in the EDF group consolidation, the value in use is determined by reference to equity or net consolidated assets, adjusted to take into account expert valuation information and information that has become known since the previous year-end.

#### 1.8.2 Investment securities

EDF has set up two investment portfolios:

- the first comprises dedicated financial assets intended to finance the end of nuclear fuel cycle operations, for which provisions have been accrued. These assets are managed separately from other financial assets and investments in view of their specific objective, and comprise bonds, equities, collective investment funds and "reserved" funds built up by EDF solely for its own use:
- the second comprises securities acquired to generate a satisfactory return on investment in the medium to long term, without participating in the management of the companies concerned.

Investment securities also include treasury shares that cover obligations relating to debt instruments providing access to the company's capital, acquired under a liquidity contract with an investment services company or through an external operation or capital reduction, in application of CNC avis 98-D of December 17, 1988.

These shares are recorded at acquisition cost. In compliance with CRC regulation 99-03 and CNC Emergency Committee opinion 2005-J of December 6, 2005, transfer duties, professional fees, commissions, legal expenses and purchasing costs are all charged to expenses, under the option used for other investments and non-consolidated investments.

The investment portfolios (shares and bonds) are recorded at acquisition cost. If the carrying amount of a security is lower than the book value, the unrealized capital loss is fully provisioned without being netted against potential gains. The carrying amount of listed securities is assessed individually, taking the stock market price into account. For unlisted securities, the carrying amount is also assessed individually, mainly in consideration of the growth prospects of the companies concerned and their share prices.

#### 1.8.3 Other financial assets

As part of Group activities, EDF grants short-term loans in foreign currencies to its subsidiaries. In order to prevent exposure to foreign exchange risks, micro-hedges may be set up by issuing commercial paper in the relevant foreign currency or by setting up short-term currency swaps. If the foreign exchange risk is totally hedged, no provision is recorded for neither the loan nor the hedging instrument. If the hedge is not effective, provisions are recorded to cover the entire amount of the unhedged foreign exchange losses.

### 1.9

### **Inventories and work-in-progress**

The initial cost of inventories includes the direct material costs (including the effect of hedging), labor costs and overheads incurred to bring the inventories to their current condition and location. They are subsequently measured at weighted average cost.

#### 1.9.1 Nuclear fuel and materials

Inventories of nuclear fuel and materials comprise fissile materials in various stages of production, and fuel in the reactor and stored. The processing cycle for nuclear fuels is longer than one year.

The stated value of nuclear fuel and materials and work-in-progress is determined based on direct processing costs including materials, labor and subcontracted services (e.g. fluoration, enrichment, etc.).

The cost of inventories for fuel in reactors but not yet irradiated includes expenses for management of spent fuel and the long-term management of radioactive waste. The corresponding amounts are taken into account in the relevant provisions.

Interest expenses incurred in financing inventories of nuclear fuels are charged to expenses for the period.

These items are valued using the weighted average cost method, applied to each component (natural uranium, fluoration, enrichment, production).

EDF does not value the uranium obtained from processed fuel, due to uncertainty over its future use.

Nuclear fuel consumption is determined for each component based on forecasts of quantities used per kWh produced. These quantities are valued at weighted average cost of inventories.

Inventories are periodically corrected in view of forecast burnt quantities based on neutronic measurements.

#### 1.9.2 Other fuels

The inventories of other fuels consist of fossil materials required for operation of the fossil-fired plants.

These inventories are measured using the weighted average cost method, applied to each component.

#### 1.9.3 Operating materials and equipment

These inventories are measured at weighted average cost. Direct and indirect purchasing costs are included in the initial cost.

Provisions concerning spare parts supplied under a maintenance program are based on the turnover of these parts and the useful lives of generation

Safety spare parts used for nuclear power plants that require specific delivery times, production specifications and utilization are included in property, plant and equipment.

#### 1.9.4 Gas held for trading

Inventories are valued at weighted average cost including direct and indirect purchasing costs, principally transmission costs.

Impairment of these inventories is determined based on the net realizable value, i.e. the future sale price.

### 1.10

#### Accounts receivable and marketable securities

#### 1.10.1 Trade receivables

Trade receivables are stated at nominal value.

Trade and other receivables also include revenue based on an estimate of energy delivered and measured but not yet billed, and energy delivered and not yet measured or billed.

A provision is recorded to cover the future cost of energy not yet measured or billed.

A provision is recorded when the carrying amount, based on the probability of recovery, assessed statistically or on a case-by-case basis depending on the type of receivable, is lower than book value. The risk associated with doubtful receivables is evaluated individually.

#### 1.10.2 Marketable securities

Marketable securities are initially recorded as assets at acquisition cost, and restated at their value in use at year-end.

For listed securities, the value in use is equal to the year-end stock market price. For unlisted securities, the value in use is the probable trading value taking the company's growth prospects into consideration.

A provision is recorded to fully cover any unrealized losses, without netting against unrealized gains.

Gains and losses on sales of marketable securities are valued using the FIFO (first in first out) method

Treasury shares purchased for attribution to employees under a specified plan are also classified as marketable securities. From the date of application of CNC opinion 2008-17 of November 6, 2008 impairment based on market price is no longer recognized in respect of treasury shares.

#### 1.11 **Deferred charges**

Bond redemption premiums are amortized on a straight-line basis over the term of the related bond (or each tranche of the bond to maturity in the case of serial bonds).

Commissions and external costs paid by EDF upon issuance of borrowings are spread on a straight-line basis over the term of the related instruments.

### 1.12

### Translation of receivables and payables in foreign currencies

Foreign currency receivables and payables are translated into Euros at the year-end exchange rates. The resulting translation differences are recorded in the balance sheet in other receivables and other liabilities under "Unrealized foreign exchange gains" and "Unrealized foreign exchange losses".

Provisions are recorded for all unrealized exchange losses on foreign currency borrowings not hedged for exchange risks. Unrealized gains are not included in the income statement.

Translation differences with respect to swaps hedging foreign currency borrowings are recorded under "Unrealized foreign exchange gains" and "Unrealized foreign exchange losses" as an offsetting entry to "Cash Instruments".

### 1.13

### Tax regulated provisions

The following items are recorded under this heading:

- excess depreciation on generation, transmission and distribution facilities computed using the declining-balance method;
- · accelerated depreciation on the chimney sulfur removal facilities of fossilfired plants;
- excess depreciation on software developed in-house by the company.

### 1.14

### **Special concession accounts**

These liabilities relate mostly to public electricity distribution concessions and hydropower concessions.

#### RECOGNITION OF SPECIAL PUBLIC DISTRIBUTION CONCESSION LIABILITIES

These liabilities represent the contractual obligations specific to the concession rules, as reported annually to the grantor:

- rights in existing assets: these correspond to the grantor's right to recover all assets for nil consideration. This right comprises the value in kind of the facilities – the net book value of assets operated under concession – less any as yet unamortized financing provided by the operator;
- rights in assets to be replaced: these correspond to the operator's obligation to contribute to the financing of assets due for replacement. These non-financial liabilities are recorded under the following headings:
  - depreciation recorded on the portion of assets financed by the grantor,
  - provision for renewal based on the difference between the replacement value at year-end and the historical value of the assets, concerning only assets due for renewal before the end of the concession; the annual allocations to the provision correspond to the difference between the replacement value as remeasured at each year-end, and the historical value, less any existing provisions. The net amount is spread over the residual useful life of the assets.

When assets are replaced, the provision and amortization of the grantor's financing recorded in respect of the replaced item are eliminated and transferred to the rights in existing assets, since they are considered as the grantor's financing for the new asset. Any excess provision is taken to income.

During the concession, the grantor's rights in assets to be replaced are thus transferred upon the asset's renewal to become the grantor's rights in existing assets, with no outflow of cash to the benefit of the grantor.

The valuation of concession liabilities is subject to uncertainty in terms of cost and disbursement dates.

#### RECOGNITION OF SPECIAL HYDROPOWER CONCESSION LIABILITIES

These mostly concern differences arising from revaluations in accordance with French legislation for fixed assets put into service before January 1, 1960 and those put into service before January 1, 1977.

The net revaluation reserve generated by the 1976 revaluation is taken to income over the residual useful life of the assets concerned.

### 1.15

### **Provisions for risks and expenses**

EDF recognizes provisions for risks and expenses if the following three conditions are met:

- EDF has a present obligation (legal or constructive) towards a third party that arises from a past event prior to the closing date;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- the value of the obligation can be estimated reliably.

Provisions are determined based on EDF's estimate of the expected cost necessary to settle the obligation. Estimates are based on management data from the information system, assumptions adopted by EDF, and if necessary experience of similar transactions, or in some cases based on independent expert reports or contractor quotes. The various assumptions are reviewed for each closing of the accounts.

The company records any changes in estimates on long-term provisions as required by CRC regulation 2000-06 and Emergency Committee regulation 2005-H.

The proceeds from expected asset disposals are not taken into account in calculating provisions, even if these disposals are closely linked to events which gave rise to the provisions.

#### **Financial** statements

If it is anticipated that all or part of the expenses necessary to settle an obligation covered by a provision will be reimbursed, the reimbursement is recognized under receivables if and only if the company is virtually certain of

It may very rarely happen that a provision cannot be booked due to lack of a reliable estimate. In such cases, the obligation is mentioned in the notes as a contingent liability, unless there is little likelihood of an outflow of resources. Contingent assets and liabilities are not recorded.

The provisions for risks and expenses mainly cover the following:

- unrealized foreign exchange losses;
- the future cost related to energy not yet measured or billed;
- future losses relating to multi-year agreements for the purchase and sale of electricity or gas:
  - losses on energy purchase agreements are measured by comparing the acquisition cost under the contractual terms with the forecast price of electricity on the European market,
  - losses on electricity sale agreements are measured by comparing the estimated income under the contractual terms with the cost of generating the energy to be supplied, based on the cost of nuclear power,
  - losses on gas sale agreements are measured by comparing the estimated income under the contractual terms with the cost of generating the energy to be supplied:
- costs of renewal of facilities operated under distribution concessions:
- This provision, which is intended to finance the renewal of installations, is equal to the difference between the replacement value and gross value of the items concerned.
- It is recorded over the useful life of the assets, in addition to industrial depreciation, to cover prefinancing of renewal.
- The replacement value is recalculated annually at December 31 based on industry-specific indicators derived from official publications. The resulting impact is spread over the residual life of the assets concerned;

- back-end nuclear cycle expenses: provisions for spent fuel management and for the long-term radioactive waste management are booked for all fuels. This provision concerns all fuel in reactors, regardless of the extent of irradiation; it also covers management expenses for radioactive waste resulting from decommissioning of nuclear plants;
- costs of decommissioning power plants and the costs relating to fuel in the reactor when the reactor is shut down (provision for last cores);
- costs of 10-year inspections of nuclear and fossil-fired power plants.

Provisions to cover back-end nuclear cycle expenses, expenses related to the decommissioning of power plants and last cores, and for future losses relating to multi-year energy purchase and sale agreements are estimated by applying a forecast long-term inflation index to the projected disbursements, which are then discounted at rates that reflect the best estimate of a long-term rate of return on bond markets.

The rate of inflation and the discount rate are based on economic parameters specific to France.

This discount rate is determined based on long series data for a sample of bonds, and takes into account the fact that some expenses covered by provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The discount effect generated at each closing to reflect the passage of time is included in financial expenses.

The impact of changes in estimates for long-term provisions with associated balance sheet assets, whether due to schedule changes, discount rate changes, new expense estimates or technological developments, is allocated to the relevant assets, with any excess allocated to the underlying asset (power plant). Revision of these parameters, taken singly or together, could have a considerable impact on the estimates over time.

### 1.16

### Provisions and obligations for employee benefits

EDF employees are entitled to benefits both during and after their employment, in application of the statutory regulations for companies belonging to the electricity and gas sector (IEG) in France.

### 1.16.1 Pension and post-employment benefit obligations

EDF's pension and post-employment obligations resulting from the financing reform for the special electricity and gas sector (IEG) pension system are described individually in the note on "Employee Benefits".

#### 1.16.2 Other long-term benefit obligations

These benefits concern EDF employees currently in service who are covered by the IEG regime, and are earned according to the statutory regulations for the electricity and gas sector. They are described in the note on "Employee Benefits".

### 1.16.3 Calculation and recognition of employee benefits

In application of the CNC Emergency Committee opinion 2000-A issued on July 6, 2000 and article 355.1 paragraph 2 of the General Chart of Accounts, EDF opted for recognition of post-employment benefits granted to personnel as of January 1, 2005.

The actuarial value of all commitments is calculated by the projected unit credit method, which determines the present value of entitlements earned by employees at year-end to pensions, post-employment benefits and longterm benefits, taking into consideration each country's specific economic conditions and expected wage increases.

In calculating pensions and other post-employment benefit obligations, this method takes the following factors into consideration, in compliance with CNC recommendation 2003-R01:

- career-end salary levels, with reference to employee seniority, projected salary levels at the time of retirement based on the expected effects of career advancement, and estimated trends in pension levels;
- retirement age, determined on the basis of the applicable provisions (such as years of service and number of children, taking into account the prolongation of the employee contribution period to qualify for a full pension);
- forecast numbers of pensioners, determined based on employee turnover rates and mortality data:
- reversion pensions, taking into account both the life expectancy of the employee and his/her spouse and the marriage rate observed for the population of employees in the electricity and gas sector;

• a nominal discount rate, depending on the duration of the obligations. In keeping with the provisions booked in the EDF group's consolidated financial statements, the rate applied was 5% at January 1, 2004.

The provision takes into account the value of the assets that cover certain obligations, which are deducted from the value of the obligation as determined above.

In accordance with the applicable accounting regulations:

- any actuarial gain or loss on pensions and post-employment benefit obligations in excess of 10% (the "corridor") of the obligations or fund assets, whichever is the highest, are recognized in the income statement progressively over the average residual working life of the company's employees;
- the provision for other long-term benefits is calculated under a simplified method. Therefore, if an actuarial estimation under the projected unit credit method is necessary, any actuarial variance and the past service cost are directly included in the provision, without application of the "corridor"

The expense booked for employee benefit obligations includes:

- the cost of additional vested benefits, and the financial discount cost on existing benefits;
- the income corresponding to the expected return on plan assets;
- the income or expenses resulting from amortization of actuarial gains or

Entitlements earned during the year are added to the provision and discounting costs are included in financial expenses.

### 1.17

### Risk hedging instruments and other derivatives

### 1.17.1 Short-term interest rate and foreign exchange rate derivatives

Short-term derivatives (short-term swaps, options and forward exchange contracts) are valued as follows:

- the corresponding off-balance sheet commitments are recorded at the nominal value of the contracts;
- margin payments are immediately recognized in the income statement;
- premiums paid or received are recognized in income at settlement;
- gains or losses generated by these instruments are recognized at settlement:
- short-term currency derivatives traded on organized markets or highly liquid over-the-counter markets comparable to organized markets and included in the portfolios at year-end are stated at year-end market value. This value is compared for each transaction to the historical value of premiums. As the company does not allocate individual gains and losses on micro-hedges to the associated transactions, the unrealized foreign exchange gains or losses are included in the financial result at market value.

### 1.17.2 Long-term interest rate and foreign exchange rate derivatives

One of the main objectives of exchange rate and interest rate risk management is to minimize their impact on equity and net income. For exchange rate risks, debts are as far as possible entered into in the local currency of the entity (parent company or subsidiary). If an acquisition is made in a different currency, an effective hedging policy (matching assets and liabilities) is set up wherever possible (micro-hedging).

Long-term instruments (swaps) are taken into account to adjust the foreign exchange result and interest expenses on a debt. If the exchange rate risk is totally hedged, no provision is recorded for either the loan or the borrowing. If the risk is only partly hedged, a provision equivalent to the total unhedged unrealized exchange loss is recorded. Provisions are recorded to cover all unrealized foreign exchange losses on swaps that are not designated as a hedge or do not qualify as a micro hedge (for instance a currency swap associated with a borrowing).

In general, payments made and received on financial instruments are spread over the term of the contract. Payments made or received in the event of early settlement are immediately included in the income statement. All of these instruments are recorded in the financial off-balance sheet commitments at the notional value of the capital committed and at fair value.

### 1.18

### **Commodity contracts**

Forward financial instruments on commodities are traded for hedging purposes. Gains and losses on these operations are included in sales or in the cost of energy purchases, depending on the nature of the hedged item.

### 1.19

#### Free shares

For the attribution of free shares to employees, a provision is established in respect of the obligation to deliver the shares, taking into consideration the services rendered by the employee. The value of the provision is based on:

- estimates of the number of shares to be remitted to employees;
- the acquisition price of shares already acquired, less any impairment of those shares:
- the market price of shares still to be acquired or the forward price plus the premium paid if the company has acquired purchase options for treas-

This provision is remeasured at each year-end prior to delivery of the shares, and is reversed when the shares are remitted to employees.

### Note

### Regulatory events in 2008 with an impact on the financial statements

**2.1** Reform of the special electricity and gas sector (IEG) pension system

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**2.2** Hydropower concessions

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**2.3** Prolongation of the period of application of the transition tariff (TaRTAM system)

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### Reform of the special electricity and gas sector (IEG) pension system

#### 2.1.1 Description of the reform

The decree on the special pension system for Electricity and Gas industry sector (IEG) employees published in France's Official Gazette (Journal Officiel) of January 22, 2008 was issued in accordance with France Pension Guideline Document (Document d'Orientation sur les Retraites) of October 10, 2007, setting forth the first modifications to the system.

The main provisions of this decree concern:

• prolongation of the IEG employee's contribution period to qualify for a fullrate pension, increased to 40 years starting in 2012; subsequent changes will be identical to those applied in the standard public-sector pension system;

- introduction of discounts and premiums in pension rates. The discount takes the form of a financial penalty applied to employees who have not paid contributions over a sufficient period to qualify for a full-rate pension. Conversely, the premium is a pension supplement applicable subject to certain conditions for employees who continue to work after the age of 60 and have paid contributions for 160 quarters;
- indexation of pensions on inflation from January 1, 2009 rather than on the basic national salary (Salaire National de Base) as done previously.

The decree came in force on July 1, 2008 and was supplemented by the decrees of June 27, 2008, July 2, 2008 and October 20, 2008 covering matters such as the introduction of a minimum pension, family and conjugal benefits, setting the maximum retirement age at 65, removing the employer's right to set the retirement age, and lifting the "15-year clause"

in certain circumstances (before this reform, at least 15 years' employment in the sector were necessary to qualify for an IEG pension).

These decrees have modified the status of IEG employees.

An agreement was signed for the IEG sector on January 29, 2008 as part of this reform, following the principles set forth in the French Pension Guideline Document. This agreement introduces the following supporting measures for the changes:

- measures concerning employees' salaries: a 4.31% increase on January 1, 2008 in the basic national salary applicable to current and retired employees, combined in the case of current employees with an elimination of the 2.85% pension contribution compensation bonus, and a revision of pay scales, including rises in starting salaries for operative staff;
- initial measures related to longer working lives, such as definition of additional grades of seniority and changes in the calculation methods of retirement gratuities.

Negotiations concerning certain supporting measures continued during the second half-year of 2008 as set out in the Guideline Document.

Sector-specific and company-specific agreements were finalized for certain welfare arrangements and the introduction of an additional pension scheme for IEG status employees. These agreements took effect from January 1, 2009 and generate no additional obligation for EDF.

Other agreements are still under discussion on matters such as how the pension system will take into consideration the specificities of different businesses, and the supplementary health coverage. These remain to be finalized in 2009, and related financial impact if any will be recognized when the agreements are signed.

#### 2.1.2 Accounting treatment

The accounting treatment applied considers that:

- the pension reform laws and regulations and the supporting measures introduced constitute a comprehensive whole, and their impact on EDF's obligations should therefore, be recognized as a single change to the regime for both long-term and post-employment employee benefit obligations, including those indirectly affected by the measures;
- the effective date of all these measures can be set at January 1, 2008.

For post-employment benefits, the impacts of the reform and the support measures are recorded in the income statement as follows:

- the impact on obligations related to vested benefits is recorded in a oneoff entry, at January 1, 2008 because it corresponds to a change in the past service cost;
- the impact on obligations related to non-vested benefits is spread over the residual vesting period;
- the impact on benefits that will vest after the date of the reform is included in the current service cost.

For long-term benefits, which are indirectly affected by the supporting measures, the impact of the changes is included directly in net income for the period.

The pension reform and its supporting measures have a positive impact on net income of €195 million on EDF's financial statements at December

### 2.2

### **Hydropower concessions**

Article 7 of Law n° 2006-1772 of December 30, 2006 on water and aquatic environments removed the outgoing operator's preferential right instituted by the law of October 16, 1919 on the use of hydropower.

Article 33 of the Law 2006-1771 of December 30, 2006 amending the 2006 France's Finance Act sets out the principle of an indemnity payable to the outgoing operator in respect of the unamortized portion of investments made by the operator during the second half of the agreement (or a minimum 10-year period), with the exception of investments required to return the assets in good condition at the end of the concession.

The implementation decree 2008-1009 of September 26, 2008 clarifies the terms of indemnification for work carried out during the second half of the concession and prior to the publication of the decree. The operator has 4 months from publication of the decree to submit a statement of the relevant expenses to the Ministry for approval, in order to receive indemnification at the end of the concession.

Once the claim has been approved by the administration, EDF will post the necessary adjustments to the Financial Statements, in particular through accelerated depreciation over the residual term of the agreement of the net book value of assets to be transferred for nil consideration when the concession expires.

### 2.3

### Prolongation of the period of application of the transition tariff (TaRTAM system)

French Law 2008-776 of August 4, 2008 on Economic Modernization prolongs the TaRTAM system until June 30, 2010.

In addition to the prolongation of the TaRTAM system, this law also extended eligibility for the transition tariff (Tarif Réglementé Transitoire d'Ajustement de Marché) to all final customers, even those who were previously eligible but had not opted into the system.

As a result of this prolongation, additional provisions of €1,263 million were recorded in the 2008 financial statements to cover EDF's contribution to electricity supplier compensation in 2009 and 2010. This is partially offset (€68 million) by reinvoicing of charges passed on to partners in the nuclear plants.

### Significant events and transactions in 2008

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In addition to the events described in note 2, the main events and transactions in 2008 with a definite or potential significant impact on the financial statements are as follows:

### Tenders for electricity sales to alternative suppliers

In accordance with the ruling of December 10, 2007 by the French competition authorities (Conseil de la concurrence), EDF tendered baseload electricity contracts to alternative suppliers in France as follows:

- the first auction took place on March 12, 2008 and concerned electricity supplies for a period of up to fifteen years. The 500 MW tendered by EDF were awarded to five companies;
- a second auction of the same kind was undertaken on November 19, 2008. Seven companies were awarded the 500 MW tendered by EDF.

### **3.2**

#### **Bond issues**

EDF made extensive use of external financing in 2008 to support the increasingly centralized financing of subsidiaries and the operating investment program.

EDF therefore undertook bond issues in 2008 totalling €5.3 billion, £0.9 billion (€1.1 billion), JPY40 billion (€0.2 billion) and CHF1,35 billion (€0.9 billion), bought by French and international institutional investors. These issues with maturities ranging from 5 to 20 years are part of EDF's policy to increase the average duration of its debt.

### 3.3

#### Financial market crisis

The financial crisis that first emerged late in the first half-year of 2008 continued over the second half-year. The impact of the crisis on the financial statements is reflected in an impairment recorded on investment securities portfolio (see notes 14 and 19).

### 3.4

### Partnership agreement with Exeltium

Following in-depth discussions, the European Commission confirmed on July 30, 2008 that the industrial partnership agreement between EDF and Exeltium (a consortium of large electricity-intensive customers) met its requirements regarding compliance with competition laws.

This agreement covers volumes of some 310 TWh spread over 24 years. Its purpose is to make energy supplies more secure for Exeltium, which will have greater visibility over long-term electricity supply prices in return for sharing risks relating to development and operation of EDF nuclear power

The first deliveries of electricity are due to take place as soon as Exeltium obtains the necessary financing in place.

### 3.5

### **Employee offering**

In the context of the sale on December 3, 2007, by the French State of 2.5% of EDF's capital to French and international institutional investors, and in application of the law of August 9, 2004, the company made an associated preferential offering to current and retired employees of EDF SA and companies in which EDF directly or indirectly holds the majority of the capital. This offering concerned 8 million existing shares to be sold by the French State, representing 15% of the total number of shares put on the

market, i.e. 0.4% of the capital. The operation comprised of two offers providing benefits in the form of free shares, preferential payment terms, and in one of the offers an additional contribution by EDF to the Group Savings Plan.

The subscription price was set by ministerial decision at €66 per share. When the offer closed on September 22, 2008, 3.2 million shares had been subscribed. Settlement and delivery took place on October 30, 2008.

### 3.6

### **Acquisition of British Energy**

EDF and British Energy Group announced on September 24, 2008 that they had signed an agreement on the terms of the takeover bid to be made by Lake Acquisitions Ltd, a wholly-owned subsidiary of EDF via EDF International, for acquisition of all the shares currently issued or yet to be issued by the British Energy Group. Lake Acquisitions Ltd backed up this offering with the announcement on September 25, 2008 that it had acquired 274,288,774 British Energy shares representing approximately 26.53% of the issued share capital of British Energy, at the price of 774 pence per share, or a total of £2,123 million.

EDF made an advance of this amount to Lake Acquisitions Ltd.

Most of the financing for the acquisition of British Energy is secured through a syndicated bank loan of £11 billion (€11.6 billion) subscribed by EDF on September 23, 2008. This loan is included in off balance sheet commitments received at December 31, 2008.

### **Agreements with Constellation Energy Group**

EDF Development Inc, a subsidiary of EDF International, and Constellation Energy Group (CEG), announced on December 17, 2008 that they had reached a final agreement, under which EDF Development Inc would acquire a 49.99% interest in Constellation Energy Nuclear Group, an entity to combine all CEG's nuclear generation activities, for \$4.5 billion.

Under the terms of this agreement, EDF Development Inc. strengthened CEG's liquidity position through an immediate \$1 billion cash payment in CEG through subscription of non-convertible cumulative preferred stock newly issued by CEG, bearing interest at 8% and maturing no later than June 30, 2010. This preferred stock will be surrendered to CEG:

- upon closing of the transaction, and credited against the \$4.5 billion purchase price for EDF's 49.99% interest in Constellation Energy Nuclear Group;
- or redeemed on December 30, 2009 for Senior Notes bearing interest at 10% and maturing on June 30, 2010 if the purchase of the 49.99% interest is not completed.

EDF Development Inc. has also contributed \$150 million to the reimbursement of certain transaction costs.

EDF Development Inc. and CEG have also entered into a two-year put option that allows CEG to sell EDF Development Inc certain non-nuclear generation assets for a value of up to \$2 billion, subject to the required regulatory authorizations.

EDF Development Inc. and CEG expect to receive the necessary regulatory approvals for the acquisition by EDF Development Inc of its interest in CEG's nuclear generation and operation/distribution business, and therefore complete the transaction, within six to nine months.

In connection with these agreements EDF provided a guarantee for payment of the obligations of the subsidiary EDF Development Inc., and granted a loan to FDF International

### 3.8

### EDF AREVA agreement for management of spent nuclear fuel

On December 19, 2008, EDF and AREVA signed a long-term framework agreement for industrial cooperation (2040), concerning removal of all EDF's spent fuel, the technical and financial conditions of transportation, processing and recycling of the spent fuel (2008-2012), and the amount of the payment for dismantling of AREVA's plant at La Hague in north-west France.

The agreement gives better visibility over the principles for future cooperation between EDF and AREVA, and is based on two reciprocal commitments:

- AREVA will operate the La Hague and the Melox plants until 2040, with the aim of continuous improvement in the industrial and economic performance for the benefit of EDF;
- EDF will use these facilities until 2040 and during that time will rely on AREVA for transportation of spent fuel.

The agreement is a continuation of the longstanding ties between the two companies, which have been based on the following arrangements since EDF's first nuclear power plants were commissioned:

• collection and transportation of spent fuel from EDF power plants to the La Hague plant;

- separation of recyclable fuel material from final residues at La Hague and supply of MOX fuel to the Melox plant;
- conditioning and minimization of the volumes of final residues, by vitrifying long life high-level waste or compacting long-life medium-level waste, for safe interim storage in dedicated installations at La Hague.

The full payment to be made by EDF to AREVA for recovering and conditioning old waste, for the final shutdown, and for the dismantling costs of the La Hague plant is fixed in the Industrial Cooperation Agreement of December 19, 2008 at € 2.3 billion, based on the economic conditions of December 31, 2007.

As a result of this framework agreement, the amount of the provision for EDF's full payment was reversed and recognized as an operating liability of €1.68 billion excluding taxes, after deduction of the advances EDF has already paid to AREVA.

The two groups have undertaken to negotiate the terms of a final contract under this framework agreement by December 31, 2009, particularly concerning the practical conditions for the settlement of the liability.

### **Sales**

Sales are comprised of:

(in millions of Euros)	2008	2007
Sales of energy	26,701	21,922
Sales of energy-related services	11,031	10,551
Other sales of goods and services	1,271	1,165
SALES	39,003	33,638

Sales are 15.9% higher than in 2007, principally as the result of:

- a rise in electricity sales revenues in France, primarily reflecting the regulated tariff increase on August 15, 2008;
- an increase in sales to the subsidiary EDF Trading, electricity auctions and sales of gas.

### Note

### **Operating subsidies**

(in millions of Euros)	2008	2007
OPERATING SUBSIDIES	1,874	2,002

Operating subsidies mainly comprise of the subsidy received or receivable by EDF in respect of the "Contribution to the Public Electricity Service" (CSPE) introduced by Law 2003-8 of January 3, 2003. This contribution is payable by end-users and collected by network operators or electricity suppliers, which then pay it to the Caisse des Dépôts et Consignations. It is intended to offset the surplus costs resulting from purchase obligations, excess generation costs in zones not connected to the mainland network, and the costs of the basic necessity tariff (produit de première nécessité) and poverty and vulnerability action measures (dispositif pauvreté et précarité).

In the financial statements, this compensation results in recognition of income of €1,866 million for 2008 (€1,993 million for 2007). The subsidy for purchase obligations decreased between the two periods due to the rise in market prices for electricity.

## Reversals of provisions, amortization and depreciation

(in millions of Euros)	2008	2007
Reversals of provisions for risks	118	193
Pensions and similar obligations	1,101	1,202
Renewal of property, plant and equipment operated under concession	4	10
Spent fuel management (1)	2,955	668
Long-term radioactive waste management (2)	134	535
Decommissioning of power plants	304	150
Last cores	111	52
Other provisions for expenses (3)	743	643
Reversals of provisions for expenses	5,352	3,260
Reversal of amortization of grantor's financing	4	-
Reversals of impairment	118	372
TOTAL	5,592	3,825

<sup>(1)</sup> Including € 2,300 million in 2008 resulting from the EDF-AREVA framework agreement, corresponding to a recognition as operating expenses the full payment for dismantling the La Hague plant (see note 8).

### Note

### Other operating income

(in millions of Euros)	2008	2007
OTHER OPERATING INCOME	1,034	535

Other operating income mainly consist of reversals of the greenhouse gas emission quotas allocated for the current year by the French State, in application of the CNC Emergency Committee opinion 2004-C of March 23, 2004. The €306 million increase in reversals of quotas is mainly due to the increase in quota prices.

<sup>(2)</sup> Including a € 394 million reversal in 2007 following application of the new definition of the operating cycle provided by the law of June 28, 2006.

<sup>(3)</sup> Including a € 497 million reversal in 2008 from the provision for the transition tariff (TaRTAM) (€ 470 million in 2007).

### **Purchases and other external expenses**

(in millions of Euros)	2008	2007
Fuel purchases used	2,457	2,671
Energy purchases (1)	9,495	5,567
Other purchases used <sup>(2)</sup>	3,227	947
Services (3)	15,881	15,288
PURCHASES AND OTHER EXTERNAL EXPENSES	31,060	24,473

<sup>(1)</sup> In 2008, the increase in energy purchases mainly concerns electricity purchases from EDF Trading, gas purchases and purchase obligations.

### **Note**

### Taxes other than income taxes

(in millions of Euros)	2008	2007
Taxes on salaries and wages	110	98
Energy-related taxes (1)	882	669
Business taxes (2)	807	882
Property taxes	254	252
Other taxes	307	267
TAXES OTHER THAN INCOME TAXES	2,360	2,168

<sup>(1)</sup> Following the introduction of the transition tariff (TaRTAM), a contribution of € 426 million was booked in 2008 (€ 221 million in 2007).

<sup>(2)</sup> Following signature of the EDF-AREVA framework agreement, the full payment of €2,300 million due for dismantling the La Hague plant is recognised as operating

<sup>(3)</sup> This item notably consists of distribution network access fees invoiced by the subsidiary ERDF.

<sup>(2)</sup> The decrease in business taxes results from the additional tax relief 2007 and 2008.

### **Personnel expenses**

#### PERSONNEL EXPENSES

(in millions of Euros)	2008	2007
Salaries and wages	3,178	2,940
Social contributions	1,917	1,737
PERSONNEL EXPENSES	5,095	4,677

The increase in personnel expenses chiefly results from application of the supporting measures for the IEG pension reform. Furthermore under the 2008 Employee Offering, EDF also made a contribution to the benefit of employees totalling € 35 million.

#### **AVERAGE WORKFORCE**

	2008			2007
	IEG status	Other	Total	Total
Executives	20,749	226	20,975	20,282
Operational, supervisory and technical staff	37,840	316	38,156	38,496
AVERAGE WORKFORCE	58,589	542	59,131	58,778

Average workforce numbers are reported on a full-time equivalent basis.

# Note

### **Depreciation and amortization**

(in millions of Euros) 2008 2007 Amortization of intangible assets 90 75 Depreciation on property, plant and equipment: - owned by EDF 1,481 1,481 - operated under concession (1) 163 169 Sub-total 1,650 1,644 Total depreciation and amortization on fixed assets 1,740 1,719 Amortization of bond issuance expenses and other capitalized expenses 1,722 1,742

(1) Depreciation concerns the hydropower concessions and public distribution concessions for the Island Energy Systems.

### **Note** Provisions

(in millions of Euros)	2008	2007
Provisions for risks	53	153
Pensions and similar obligations	448	453
Renewal of assets operated under concession	13	14
Management of spent nuclear fuel	413	500
Long-term management of radioactive waste (1)	21	143
Decommissioning of fossil-fired power plants	127	70
Other provisions for expenses (2)	1,501	689
Provisions for expenses	2,523	1,869
Provisions for depreciation	258	155
TOTAL	2,834	2,177

<sup>(1)</sup> Including € 132 million of additional provisions in 2007 following changes in estimates underlying the provision for long-term management of long-life high and mediumlevel radioactive waste.

### Note

### Other operating expenses

(in millions of Euros)	2008	2007
Greenhouse gas emissions	396	64
Other operating expenses	1,048	753
TOTAL	1,444	817

The increase in greenhouse gas emission quotas expenses results from the rise in quotas prices.

<sup>(2)</sup> Including an additional allocation of € 1,263 million in 2008 as a result of prolongation of the transition tariff system (TaRTAM) to 2010. In 2007 when the transition tariff was introduced, the allocation was € 497 million.

### Financial result

(in millions of Euros)	2008	2007
Expenses on long-term financial liabilities	(823)	(681)
Expenses on short-term financial liabilities	(22)	(364)
Net charges on sales of marketable securities	(30)	(12)
Income from other securities and receivables related to fixed assets	644	599
Income on short-term financial receivables	205	298
Net income on sales of marketable securities	75	172
Net Financial Costs	49	12
Realized exchange losses	(1,797)	(916)
Realized exchange gains	1,751	854
Foreign exchange result (1)	(46)	(62)
Other financial income	351	219
Other financial expenses	(675)	(84)
Allocations to amortization and provisions on financial items (2)	(4,781)	(2,351)
Financial income from investments (3)	1,572	661
Reversals of provisions and transfers of charges (4)	373	1,824
Other financial income and expenses	(3,160)	269
FINANCIAL RESULT	(3,157)	219

<sup>(1)</sup> The 2008 foreign exchange result of € (46) million is primarily explained by a net exchange loss of €41 million after economic hedging of loans to EDF Energy.

# Note

### **Exceptional result**

In 2008, exceptional items resulted in net income of € 237 million, the main items of which are the following:

- the disposal of shares in ARCELOR MITTAL generated a capital gain of €121 million;
- net reversals of accelerated tax depreciation on property, plant and equipment and intangible assets amounted to € 88 million;
- reversal of the additional depreciation generated by the 1976 revaluation amounted to € 32 million;
- disposals of items of property, plant and equipment generated a capital gain of € 22 million, principally related to real estate sales.

<sup>(2)</sup> In 2008, this item includes impairment on dedicated assets (€ 1,408 million) and on shares of EDF International (€ 396 million). It also includes the discount expenses for long-term provisions (nuclear and employee benefit provisions) and unrealised foreign exchange losses.

<sup>(3)</sup> In 2008, this item mainly comprises of dividends: €581 million received from EDF International, €227 million from ERDF and €195 million from EDF Holding, for which there was no equivalent in 2007.

<sup>(4)</sup> An amount of € 1,521 million was reversed from the provision on EDF International shares in 2007.

In 2007, exceptional items resulted in net income of €1,075 million, the main items of which are the following:

- following the transfer of the distribution activity to a subsidiary by a partial business transfer at January 1, 2007, the liabilities corresponding to the 1976 revaluation, subsidiaries and exceptional depreciation on contributed items were no longer relevant, and were reversed as exceptional income of €699 million;
- sales of property, plant and equipment generated a gain of € 153 million, including € 124 million for the contribution to SOFILO and € 23 million for other real estate sales;
- a net expense of € 129 million was booked to cover expenses related to employee share ownership;

- the sale of EDISON subscription warrants and securities generated a gain of €111 million;
- sales of investment funds generated net gains of €95 million;
- net reversals of accelerated tax depreciation on property, plant and equipment and intangible assets amounted to €78 million;
- reversal of the additional depreciation generated by the 1976 revaluation amounted to €34 million.

In 2007, transfer of the distribution activity to a subsidiary led to recognition of a net book value of €3,362 million in both expenses and gains on disposals of assets, with a neutral effect on exceptional profit.

### Income taxes Note **16.1** Tax Group 431 **16.2** Income tax payable 432 **16.3** Deferred taxes 432

### 16.1 **Tax Group**

Since January 1, 1988, EDF and certain subsidiaries have formed a group subject to the tax consolidation system existing under French tax legislation (articles 223A to 223U of the French Tax Code). The tax consolidation group for the 2008 financial year was modified following changes in the EDF group, and now comprises the following subsidiaries:

- EDEV, EDEV Téléservices (Edelia), EDF Optimal Solutions (ex-C21), Dunkerque LNG, Cofiva, EDF Partenariats Services, Everbat, H4, Hydrostadium, SAE, Safidi, SCS, Shema, Sodetrel, Synergrid, HTMS, Eco-Alternative;
- RTE EDF Transport, @rteria, RTE International SAS;
- CSR, EDF International, GGF, Sapar, EDF Holding SAS;
- C2, C3, C4, C9, C13, C14, C15, C16, C17, C22, IES France, EDF Assurances;
- EDF PEI SAS, EDF PEI Corse du Sud, EDF PEI Pointe-Jarry, EDF PEI Degrad des Cannes, EDF PEI Bellefontaine, EDF PEI Port Est, EDF PEI Haute-
- Sofilo, Immobilière Montpellier Comédie, Immobilière Wagram Étoile.

## Income tax payable

Under article 223A of the French Tax Code, EDF, as the head of the tax consolidated group, is the sole entity responsible for payment of income taxes and additional related contributions.

The tax consolidation agreement between the members of the tax group stipulates that the arrangement must be neutral in effect. In application of this principle, each subsidiary pays the consolidating company a contribution to the Group income tax equivalent to the tax it would have paid had it been taxed separately.

The tax consolidation agreement between EDF and the subsidiaries included in the tax group requires EDF to reimburse loss-making subsidiaries for the tax saving generated by their losses, as and when the entities concerned make taxable profits.

In 2008, the tax group generated taxable profit. The income tax payable for the tax group amounts to €356 million.

The company at the head of the tax group, EDF, recorded an income tax receivable of €346 million. The breakdown is as follows:

- € 310 million for the taxable loss of 2008, as EDF is the head of the tax
- € 24 million for adjustments resulting from the tax consolidation;
- € 12 million for adjustments relating to the previous year.

In 2008 EDF underwent a tax inspection covering tax years 2004, 2005

At the end of the year, the company was notified of a proposed tax reassessment for tax years 2004 and 2005 amounting to €219 million including late payment penalties. EDF is contesting all the corrections notified.

# 16.3

## **Deferred taxes**

Deferred taxes are not recognized in the individual accounts of EDF:

- deferred taxes result from differences between the accounting bases and tax bases of items. They generally arise as a result of timing differences in the recognition of income and expenses;
- deferred tax assets reflect expenses which will be tax deductible in future years or losses carried forward which will reduce taxable income in
- deferred tax liabilities reflect either advance tax deduction of future accounting expenses or accounting revenues that will be taxable in future years and will increase the tax basis.

Changes in deferred taxes are as follows:

2008	Change	2007
(12,968)	(1,610)	(11,358)
(2,011)	(667)	(1,344)
(145)	(49)	(96)
(15,124)	(2,326)	(12,798)
3,342	2,723	619
10	10	-
3,352	2,733	619
79	-	79
79	-	79
(11,693)	407	(12,100)
(4,058)	143	(4,201)
1	-	1
	(12,968) (2,011) (145) (15,124) 3,342 10 3,352 79 79 (11,693)	(12,968) (1,610) (2,011) (667) (145) (49) (15,124) (2,326)  3,342 2,723 10 10 3,352 2,733 79 - 79 - (11,693) 407 (4,058) 143

<sup>(1)</sup> Mainly concerning post-employment benefits granted to personnel.

# **Gross values of intangible and tangible fixed assets**

,	Gross value	Increases	Decreases	Gross value
(in millions of Euros)	at 12.31.2007			at 12.31.2008
Intangible assets				
Software	368	87	42	413
Other (1)	291	403	60	634
Sub-total	659	490	102	1,047
Property, plant and equipment owned by EDF				
Land	135	5	10	130
Buildings	8,855	137	86	8,906
Nuclear power plants	44,614	702	251	45,065
Machinery and plant other than networks	8,792	529	74	9,247
EDF-owned networks	559	20	-	579
Other	968	102	86	984
Sub-total	63,923	1,495	507	64,911
Property, plant and equipment operated under cond	cession <sup>(2)</sup>			
Land	36	1	-	37
Buildings	8,358	23	7	8,374
Machinery and plant other than networks	967	8	4	971
Concession networks	1,673	109	13	1,769
Other	12	1	2	11
Sub-total	11,046	142	26	11,162
Assets in progress				
Tangible assets (3)	2,145	2,503	1,570	3,078
Intangible assets	332	261	93	500
Pre-investments	3		3	-
Advances and progress payments on orders	401	338	-	739
Sub-total Sub-total	2,881	3,102	1,666	4,317
TOTAL	78,509	5,229	2,301	81,437

<sup>(1)</sup> The € 403 million increase includes € 302 million related to greenhouse gas emission quotas allocated by the French State in 2008.

Most of the value of fixed assets commissioned during the year is recorded as a decrease in assets in progress.

<sup>(2)</sup> Assets operated under concession belong to the Island Energy Systems and hydropower concessions.

<sup>(3)</sup> Investments in 2008 mainly concerned nuclear equipment for existing plants, construction of the EPR at Flamanville and renovation of fossil-fired plants.

# Depreciation, amortization and provisions on intangible and tangible fixed assets

	Accum.	Increases	Decreases	Accum.
(in millions of Euros)	at 12.31.2007			at 12.31.2008
Intangible assets				
Software	167	90	42	215
Other	46	12	16	42
Sub-total	213	102	58	257
Property, plant and equipment owned by EDF				
Buildings and land developments	5,604	195	74	5,725
Nuclear generation plants	28,826	1,262	373	29,715
Machinery and plant other than networks	6,560	218	75	6,703
EDF-owned networks	234	17	0	251
Other	682	64	61	685
Sub-total Sub-total	41,906	1,756	583	43,079
Property, plant and equipment operated under con	ncession			
Buildings and land developments	4,964	115	4	5,075
Machinery and plant other than networks	718	14	3	729
Concession networks	630	48	11	667
Other	11	0	2	9
Sub-total Sub-total	6,323	177	20	6,480
TOTAL	48,442	2,035	661	49,816

## Investments

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# 19.1

### **Movements in investments**

(in millions of Euros)	Gross value at 12.31.2007	Increases	Decreases	Reclassification	Gross value at 12.31.2008
Investments (1)	30,462	3,342	33	(345)	33,426
Receivables related to investments (2)	8	2,231	3	-	2,236
Investment securities (3)	8,054	7,208	5,529	-	9,733
Other investments	147	273	266	-	154
Loans (4)	139	137	145	-	131
Loans to subsidiaries (5)	9,812	1,256	3,480	(393)	7,195
Other deposits and guarantees (6)	712	740	718	(620)	114
Total	49,334	15,187	10,174	(1,358)	52,989

(in millions of Euros)	At 12.31.2007	Increases	Decreases	Reclassification	At 12.31.2008
Provisions on investments and related receivables (7)	(461)	(464)	-		(925)
Provisions on investment securities (8)	(185)	(1,477)	27		(1,635)
Provisions on loans and other financial assets	(21)	(1)	10		(12)
Total	(667)	(1,942)	37	-	(2,572)
NET VALUE	48,667				50,417

- (1) The net change in this item mainly results from:
  - a. the capital increase by C3 (€ 2,806 million), the holding company that owns the shares in EDF Investissements Groupe (EIG), the financing company for Group subsidiaries;
  - b. the capital increase by EDEV through a € 415 million cash contribution and capitalisation of a receivable of € 393 million (reclassification);
  - c. the capital increase by EDF Production Insulaire (€100 million);
  - d. redemption of the contribution premium of Wagram Holding 3 for € 598 million via the current account (reclassification);
  - e. the capital reduction by IEB (€141 million) (reclassification).
- (2) This mainly comprises an advance of £2,123 million (€2,229 million at December 31, 2008) to Lake Acquisitions to finance the purchase of British Energy shares in September 2008.
- (3) At December 31, 2008 this heading includes €9,201 million of financial investments intended to finance the following operations covered by balance sheet provisions:
  - back-end nuclear fuel cycle;
  - nuclear plant decommissioning expenses;
  - reprocessing of last core fuel and removal and long-term management of the corresponding radioactive waste. It also includes a share portfolio set up to generate a satisfactory return in the medium to long term. At December 31, 2008, this portfolio totaled € 473 million and consisted principally of shares in Veolia Environnement.
- (4) This includes €95 million of loans granted to employees under the 2008 Employee Offering.
- (5) Loans to subsidiaries at December 31, 2008 total €7,195 million, including €4,169 million for RTE SA, €1,062 million for EDF International, €829 million for EDF Energy, and €531 million for C3. Movements were also affected by the foreign exchange effect of the year. The loan to EDF International was undertaken in connection with the agreements between the EDF group and Constellation Energy Group.
- (6) The reclassification of an amount of € 620 million as an operating liability results from the signature of the EDF-AREVA framework agreement.
- (7) Additional provisions were recorded for shares in IEB (€62 million) and EDF International (€396 million).
- (8) The change in this item results from impairment of €1,408 million recorded in respect of dedicated assets.

## Subsidiaries and investments of at least 50% of capital

Name	Gross book value of shares	Impairment recorded at 12.31.2008	% capital owned	Equity 2007	Net income 2007	Dividends received 2008	Sales 2007
(in millions of Euros)	owned						
I. Subsidiaries							
* Holding companies							
EDEV	1,268		100	607	69	-	4
EDF International	13,309	612	100	12,226	1,962	581	-
MNTC Holding	1,076		100	1,222	35	-	-
EDF Production Électrique Insulaire SAS	105		100	5	(1)		-
EDF Holding SAS	1,950		100	2,155	205	195	-
Société Holding Wagram 3	834		100	1,504	108	118	-
Société Holding Wagram 4	1,661		100	1,914	26		-
* Real estate companies							
GGF	471		100	399	30	40	25
SOFILO	937		100	792	43	79	98
* Industrial and commercial companies							
France							
Centrale Électrique Rhénane de Gambsheim	3		50	11	NM	-	2
Centrale Sidérurgique de Richemont (CSR)	152	152	100	9	(3)	-	1
Edenkia	NM		50	NM	NM	NM	
Dalkia Investissement	200		50	245	20	10	10
RTE SA	4,030		100	4,693	387	232	4,125
ERDF	2,700		100	3,009	302	227	10,808
Other countries							
EDF Belgium	26		100	54	13	4	328
Électricité d'Emosson SA	14		50	85	NM	-	23
Rheinkraftwerk Iffezheim (RKI)	3		50	10	NM	-	5
Forces Motrices du Chatelôt	1		50	9	NM	-	3
* Financial companies							
Société Anonyme de Gestion et de Contrôle des Participations (Sapar Finance)	15		100	16	1	1	-
C3	2,996		100	157	(16)	-	-
* Other (EIG EIFER)	42	41					
TOTAL I	31,793	805				1,487	

NM: Not Material (less than € 500,000).

# 19.3 Subsidiaries and investments under 50% of capital

Name	Gross book value of shares	Impairment recorded at 12.31.2008	% capital owned	Equity 2007	Net income 2007	Dividends received 2008
(in millions of Euros)	owned					
Total I - carried forward	31,793	805				1,487
II. Investments						
II.1 Companies in which EDF						
has an interest of between 10% and 50%						
* Industrial and commercial companies						
France						
Dalkia International	425		24	1,807	26	4
Dalkia Holding	897		34	1,382	211	43
Other countries						
Italenergia Bis	184	115	18	1,208	120	21
Total II.1	1,506	115				68
II.2 Companies in which EDF						
has an interest of less than 10%:						
AREVA	123		2	2,710	726	6
Other companies	3					
Other countries						
Force Motrice de Mauvoisin	1		10	71	3	
Total II.2	127	0				6
TOTAL II	1,633	115				74
TOTAL INVESTMENTS, GROSS (I + II)	33,426	920		_		1,561
TOTAL INVESTMENTS, NET	32,506					

## **Investment securities portfolio**

		At start of year			At year-end		
(in millions of Euros)	Gross book value	Net book value	Estimated value	Gross book value	Net book value	Estimated value	
VALUE OF INVESTMENT SECURITIES	8,054	7,868	9,208	9,733	8,104	8,395	

The investment securities portfolio is mainly comprised of the following dedicated assets:

- investment securities currently held and managed directly by EDF, including EDF's interest in ARCELOR MITTAL and interest rate securities (bonds and negotiable debt instruments);
- specialized collective investment funds on leading international markets, managed by independent French or foreign asset management companies selected on the basis of solicited proposals or through a call for bids. These funds cover various segments of the bond or equities markets, with EDF aiming to achieve the broadest diversification possible: European, North

American, and Japanese equities and worldwide bonds. They are held through open-end funds and "reserved" funds established by EDF solely for its own use. The performance of each fund is measured based on a benchmark market indicator appropriate to the stock market selected.

These assets, managed on a long-term basis, are comprised of diversified bond, money market and equity investments, in accordance with a strategic allocation determined by the Board of Directors, revised periodically.

The dedicated investment fund portfolio breaks down as follows:

	2	2008	2007		
(in millions of Euros)	Net book value	Net asset value (1)	Net book value	Net asset value (1)	
North American equities	222	222	365	404	
European equities	235	235	323	417	
Japanese equities	19	19	29	29	
Worldwide bonds	612	670	612	644	
Total dedicated funds	1,088	1,146	1,329	1,494	
Other financial investments (direct or through investment funds)	6,551	6,842	6,027	6,568	
TOTAL DEDICATED ASSETS	7,639	7,988	7,356	8,062	

<sup>(1)</sup> Fair value includes unmatured accrued interest.

These funds are carried at historical value and, if necessary, impairment is recorded when the net asset value is less than the historical value. When the net asset value exceeds the historical value, no unrealized capital gain is recorded.

**19.5** 

## **Variation in treasury shares**

(in millions of Euros)	Gross value at 12.31.2007	Increases	Decreases	Gross value at 12.31.2008
TREASURY SHARES	9	262	252	19

A total of 465,743 treasury shares held at December 31, 2008 are included in investment securities. These shares were acquired under a liquidity contract with an investment services provider.

## **Related companies**

20.1 Relations with subsidiaries

439

20.2 Relations with the French State and State-owned entities

439

# 20.1

### **Relations with subsidiaries**

Companies  (in millions of Euros)	EDF's r	eceivables (1)	EDF's lial	oilities <sup>(1)</sup>	Financial expenses	Financial
	Loans	Trade receivables	Net liabilities included in current account	Trade liabilities		income
RTE	4,169	194		169		254
EDF Energy	829					106
Lake Acquisitions	2,229					
C3	531					37
EDFI	1,062					7
ERDF	132	151			(45)	20
EDF Trading	355	2,014		1,060		25
Fenice	51					
Current account ERDF				277	(21)	
Group cash management agreement with	subsidiaries		1,585		(60)	
Tax consolidation agreement (2)		43		618		
Agreement for investment of subsidiaries' ca	sh surpluses (3)		3,536		(169)	

<sup>(1)</sup> Receivables and payables of more than €50 million.

# 20.2

## Relations with the French State and state-owned entities

### 20.2.1 Relations with the French State

The French State holds 84.66% of the capital of EDF SA at December 31, 2008, and is thus entitled in the same way as any majority shareholder to control decisions that require approval by the shareholders.

In accordance with the legislation applicable to all companies having the French State as their majority shareholder, EDF is subject to certain inspection procedures, in particular economic and financial inspections by the French State, audits by the French Court of Auditors (Cour des Comptes) and Parliament, and verifications by the French General Finance Inspectorate (Inspection Générale des Finances).

Under an agreement entered into by the French State and EDF on July 27, 2001 concerning the monitoring of external investments, procedures exist for prior approval by or notification (advance or otherwise) of the French State in respect of certain planned investments, additional investments or disposals by EDF. This agreement also introduced a procedure for monitoring the results of external growth operations.

The public service contract between the French State and EDF was signed on October 24, 2005. This contract is intended to form the framework for public service missions entrusted by the lawmaker to EDF for an unlimited period, since the Law of August 9, 2004 simply requires presentation of a report every three years to the French parliament without stipulating the duration of the contract. The first three-year report was remitted to the French State during 2008.

EDF, like other electricity producers, also participates in the multi-annual generation investment program defined by the Minister in charge of energy, which sets objectives for the allocation of generation capacity.

<sup>(2)</sup> Including EDF International (€ 463 million).

<sup>(3)</sup> Including ERDF's cash investments of €2,400 million.

### **Financial** statements

Finally, the French State intervenes through the regulation of electricity and gas markets, particularly for authorization to build and operate generation facilities, and establishment of sales tariffs for customers that have stayed on the regulated tariffs, transmission and distribution tariffs, and the level of the Contribution to the Public Electricity Service (Contribution aux charges de service public de l'électricité or CSPE).

### 20.2.2 Relations with GDF SUEZ

EDF and GDF SUEZ have two common services governed by agreements:

- the Health and Safety Delegation;
- $\bullet$  the Information Technology and Telecommunications Division (DIT), which is responsible for certain information systems.

The current account with GDF SUEZ showed a balance of €10 million at December 31, 2008.

### 20.2.3 Relations with public sector entities

EDF enters into normal business transactions with public sector entities, mainly for electricity supplies.

Reprocessing and transportation of nuclear fuel by AREVA for EDF account for most of the energy purchase costs from state-owned entities. Other purchases concern nuclear plant maintenance services provided by the AREVA Group.

EDF also owns shares in AREVA valued at €123 million at December 31, 2008.

# **Note**

## **Inventories and work-in-progress**

(in millions of Euros)	Nuclear fuel and materials	Other fuels	Other raw materials	Work in process for production of goods and services	Total
Gross value at 12.31.2007	6,194	310	566	33	7,103
Provisions at 12.31.2007	(11)		(131)	(16)	(158)
Net value at 12.31.2007	6,183	310	435	17	6,945
Gross value at 12.31.2008	6,371	446	613	25	7,455
Provisions at 12.31.2008	(13)		(145)	=	(158)
NET VALUE AT 12.31.2008	6,358	446	468	25	7,297

# Receivables and prepaid expenses

Note

	Gross	Gross		Liquidity			
	value	value	Within	Between	After		
(in millions of Euros)	at 12.31.2007	at 12.31.2008	1 year	2 and 5 years	5 years		
Fixed asset receivables							
Advances to subsidiaries and affiliates (1)	8	2,236	2,236				
Loans	138	131	35	87	9		
Other investments (2)	10,525	7,309	2,722	3,296	1,291		
Sub-total	10,671	9,676	4,993	3,383	1,300		
Current asset receivables							
Trade receivables							
Amounts billed	2,174	2,183	2,183				
Unbilled receivables (3)	8,244	9,239	9,239				
Other operating receivables (4)	3,132	5,929	5,682	64	183		
Sub-total	13,550	17,351	17,104	64	183		
Cash instruments	59	399	399				
Prepaid expenses	454	812	601	113	98		
Advances and progress payments on orders	412	629	608	5	16		
TOTAL	25,146	28,867	23,705	3,565	1,597		

<sup>(1)</sup> Including an advance of €2,229 million to Lake Acquisitions for the acquisition of British Energy.

<sup>(2)</sup> Including € 7,195 million of loans to subsidiaries at December 31, 2008.

<sup>(3)</sup> Mainly concern receivables for energy delivered and measured but unbilled, and energy neither delivered nor billed.

<sup>(4)</sup> Including €1,599 million of receivables on Group companies, principally EDF Trading, €3,081 million of receivables on the French State, and €723 million for the Contribution to the Public Electricity Service (CSPE).

## **Marketable securities**

(in millions of Euros)	2008	2007	Change
Treasury shares marketable securities (1)	168	-	168
Euro investment funds	5,337	1,881	3,456
Negotiable debt instruments (Euros or other currencies) maturing within 3 months (2)	1,354	2,230	(876)
Negotiable debt instruments (Euros) maturing after 3 months (2)	567	3,823	(3,256)
Euro bonds	366	506	(140)
Other marketable securities	4	21	(17)
Gross value	7,796	8,461	(665)
Provisions (3)	(129)	(5)	(124)
NET VALUE	7,667	8,456	(789)

<sup>(1) 2,805,000</sup> shares were purchased for the purposes of the free share plan (ACT 2007).

<sup>(2)</sup> In 2008, short-term negotiable debt instruments include € 670 million of dedicated assets compared to €545 million in 2007.

<sup>(3)</sup> Provisions mainly consist of an impairment of € 36 million recorded on treasury shares, and € 93 million on investment funds.

# Variation in cash and cash equivalents reported in the cash flow statements

(in millions of Euros)	2008	2007	Change
Marketable securities	7,796	8,461	(665)
Cash and cash equivalents	586	913	(327)
Sub-total in balance sheet assets	8,382	9,374	(992)
Euro investment funds	(5,337)	(1,881)	(3,456)
Negotiable debt instruments (Euro) maturing after 3 months	(567)	(3,823)	3,256
Bonds	(366)	(506)	140
Marketable securities (non Euro)	(168)		(168)
Accrued interest on marketable securities maturing after 3 months	(4)	(20)	16
"Cash and cash equivalents" in the cash flow statement	(6,442)	(6,230)	(212)
Purchases of exchange options classified as cash instruments in the balance sheet	5	10	(5)
Cash advances to subsidiaries (cash pooling agreements) included in "other operating receivables" in the balance sheet	34	70	(36)
Cash advances from subsidiaries (cash pooling agreements) included in "other operating liabilities" in the balance sheet (1)	(1,619)	(4,031)	2,412
"Cash and cash equivalents" in the cash flow statement	360	(807)	1,167
Elimination of the effect of currency fluctuations			98
Elimination of net financial income on cash and cash equivalents			(10)
NET VARIATION IN CASH AND CASH EQUIVALENT: SUBTOTAL A $+$ B $+$ C in the CFS			1,255

<sup>(1)</sup> The current account with ERDF, which was classified as cash and cash equivalents at December 31, 2007 at a net value of € 2,275 million, was reclassified in 2008 as a cash investment agreement. The change in this item is included in net cash flows from financing activities (issuance of borrowings and underwriting agreements).

# Note

## Unrealized foreign exchange gains and losses

Net unrealized foreign exchange gains and losses total €296 million (net loss).

Unrealized exchange losses amounted to €513 million and mainly result from the fluctuation in the pound sterling affecting loans to subsidiaries.

Unrealized exchange gains amount to €217 million, and include €128 million concerning swapped borrowings in GBP and €72 million concerning unhedged negotiable debt instruments issued in USD.

## **Changes in equity**

(in millions of Euros)	Capital and capital contributions	Reserves and premiums	Retained earnings	Net income	Investment subsidies received	Tax- regulated provisions	Total equity
At 12.31.2006	911	6,884	290	6,055	84	7,929	22,155
Allocation of 2006 net income			3,942	(3,942)			-
Dividend distribution				(2,114)			(2,114)
2007 net income				4,934			4,934
Interim dividend			(1,057)				(1,057)
Other changes		(10)			(37)	(733)	(780)
At 12.31.2007	911	6,874	3,175	4,934	47	7,197	23,138
Allocation of 2007 net income			3,659	(3,659)			-
Dividend distribution			2	(1,275)			(1,273)
2008 net income				867			867
Interim dividend			(1,164)				(1,164)
Other changes		(1)	75		8	(90)	(8)
AT 12.31.2008	911	6,873	5,747	867	55	7,107	21,560

The €1,578 million decline in equity in 2008 is mainly attributable to the following:

- €(1,273) million for the balance of dividend distributions from 2007 net income as decided at the General Shareholders' meeting of May 20, 2008 (€0.7 per share, paid on June 2, 2008);
- € (1,166) million for 2008 interim dividend distributions as decided at the Board of Directors' meeting of November 20, 2008 (€0.64 per share, paid on December 17, 2008, totalling €1,164 million excluding treasury shares);
- €867 million of net income for 2008;
- € (8) million in other changes, mainly corresponding to net reversals of €(90) million from tax-regulated provisions and the €75 million effect of the change in accounting method for the expense related to the free share plan, under CNC opinion 2008-17.

The €983 million variation in equity in 2007 is mainly attributable to the following:

• €(2,114) million for dividend distributions from 2006 net income as decided at the General Shareholders' meeting of May 24, 2007 (€ 1.16 per share, paid on June 4, 2007);

- € (1,057) million for 2007 interim dividend distributions as decided at the Board of Directors' meeting of November 7, 2007 (€0.58 per share, paid on November 30, 2007);
- € 4,934 million of net income for the year, including € 699 million corresponding to reversals of reserves and subsidies no longer needed following the transfer of the distribution activity to a subsidiary;
- € (780) million of changes: € (699) million related to the transfer of business to a subsidiary, and €(81) million of other changes.

#### SHARE CAPITAL

At December 31, 2008, the share capital amounts to €911,085,545, comprising 1,822,171,090 fully subscribed and paid-up shares with nominal value of €0.5 each, owned 84.66% by the French State, 13.15% by the public (institutional and private investors), and 2.01% by current and retired Group employees, and 0.18% held by EDF as treasury shares.

## **Special concession accounts**

(in millions of Euros)	2008	2007
Rights in hydropower concession assets		
- value in kind of assets	182	182
- revaluation difference	1,134	1,164
Rights in hydropower assets	1,316	1,346
Rights in public distribution concession assets (1)		
- value in kind of assets	1,137	1,077
- revaluation difference	- 1	1
- unamortized financing by the operator	(633)	(584)
- amortization of grantor financing	202	195
Contributions received for concessionary plant assets under construction	16	14
Rights in public distribution assets	722	703
TOTAL	2,038	2,049

<sup>(1)</sup> Rights in public distribution concession assets concern Island Energy Systems (IES).

# Note

# Provisions for risks and contingent liabilities

	2007	Increases		Decreases		Other	2008	
(in millions of Euros)		Operating	Financial	Exceptional	Utilizations	Reversals		
Provisions for unrealized exchange losses (1)	32		505		(32)			505
Provisions for risks related to investments	2							2
Provisions for losses on contracts	60	36	3		(14)	(38)		47
Provisions for other risks	272	17	3		(40)	(27)	(1)	224
PROVISIONS FOR RISKS	366	53	511		(86)	(65)	(1)	778

<sup>(1)</sup> The financial increase essentially relates to the GBP fluctuation for loans granted to subsidiaries.

### **Contingent liabilities**

#### INDIVIDUAL TRAINING ENTITLEMENT (DROIT INDIVIDUEL À LA FORMATION OR DIF)

The French Law of May 4, 2004 allows each employee an individual entitlement to a minimum of 20 hours of training per year, which may be accumulated over 6 years. The company agreement with unions signed on February 24, 2006 defines the conditions for exercising this entitlement, listing the types of training eligible. Expenses for such training are recorded as incurred.

DIF entitlements earned but not yet used at December 31, 2008 total 6,030,919 hours, including 6,012,013 for which no application has been made.

#### STATEMENT OF OBJECTIONS FROM THE EUROPEAN COMMISSION

EDF has received a statement of objections from the European Commission's General Directorate for competition, relating to the long-term contracts concluded by EDF in France with electricity end-users, and major industrial customers in particular. The Commission claims that these contracts are likely to restrict access to the French electricity market and may constitute abuse of a dominant market position.

#### COMPLAINT BY SOLAIRE DIRECT

On May 19, 2008, Solaire Direct filed a complaint and an application for interim measures with France's Competition Council (Conseil de la Concurrence), alleging that "practices by the EDF group and its subsidiaries on the global services market for photovoltaic electricity generation" constituted abuse of a dominant market position likely to hinder the arrival and growth of new entrants on that market. In particular, it claimed that EDF's sales network was being used to promote the activities of the EDEV subsidiary EDF-ENR

# Note

## Provisions for back-end nuclear cycle and decommissioning

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# **29.1**

## Provisions for the back-end nuclear cycle

Provisions at December 31, 2008 are calculated under the principles presented in note 1.15, and comply with the instructions of the law of June 28, 2006 and its implementing provisions.

Changes in provisions for the back-end nuclear cycle break down as follows:

	2007	Incre	eases	Decreases		Other (2)	2008
(in millions of Euros)		Operating	Financial <sup>(1)</sup>	Utilizations	Reversals		
Provision for spent fuel management <sup>(3)</sup>	10,759	413	504	(2,955)		(168)	8,553
Provision for long-term radioactive waste management	5,901	21	293	(124)	(10)	77	6,158
PROVISIONS FOR BACK-END NUCLEAR CYCLE	16,660	434	797	(3,079)	(10)	(91)	14,711

<sup>(1)</sup> Financial expenses related to discounting

<sup>(2)</sup> This corresponds to the portion of fuel in the reactor but not yet irradiated, with an associated entry in inventories.

<sup>(3)</sup> Including € 2,300 million of reversals resulting from the EDF-AREVA framework agreement on the full payment to be made for dismantling the La Hague plant.

The corresponding expenses are estimated based on the economic conditions at year-end, and spread over a forecast disbursement schedule. A provision is booked at a discounted value at year end (using a 2% inflation and a 5% discount rates).

	200	08	2007		
(in millions of Euros)	Costs based on economic conditions at year-end	Amounts in provisions at present value	Costs based on economic conditions at year-end	Amounts in provisions at present value	
Provision for spent fuel management	13,675	8,553	16,209	10,759	
Provision for long-term radioactive waste management	21,464	6,158	20,048	5,901	
PROVISIONS FOR BACK-END NUCLEAR CYCLE	35,139	14,711	36,257	16,660	

## 29.1.1 Provisions for spent fuel management

This covers services in connection with the following:

- removal of spent fuel from EDF's generation centers, reception, interim storage and processing, including conditioning and storage of the resulting waste. Processing expenses exclusively concern spent fuel that can be recycled in existing facilities, including the portion in reactors but not yet irradiated. Measurement of these expenses follows the EDF-AREVA framework agreement governing back-end nuclear fuel cycle contracts for the post-2007 period, signed on December 19, 2008. They are calculated based on forecast physical volumes at year end;
- oxidation and storage of uranium obtained from processed fuel that is not immediately recycled. Measurement of these expenses is based on EDF's best estimates, taking into account the ongoing EDF-AREVA negotiations and short-term recycling forecasts for these materials.

For fuel in reactors but not yet irradiated, provisions are booked against an increase in the value of the fuels included in inventories.

EDF's contribution towards final shutdown and decommissioning costs for the La Hague processing plant, and its share in the cost of recovering and conditioning old waste resulting from fuel processing on the La Hague site, is fixed in the EDF-AREVA framework agreement of December 19, 2008. Until June 30, 2008 this contribution as measured by EDF was recorded as a component of the provision for spent fuel management. Since the agreed payment to AREVA will release EDF from any further obligations in this respect, the corresponding amount has been reversed from the provision, and an operating liability has been recognized at December 31, 2008 at the nominal amount of the payment as set forth in the EDF-AREVA agreement.

## 29.1.2 Provisions for long-term radioactive waste management

This includes future expenses for:

- removal and storage of radioactive waste resulting from decommissioning of regulated nuclear installations operated by EDF;
- removal and storage of radioactive waste resulting from spent fuel processing at La Hague;
- long-term and direct storage of spent fuel that cannot be recycled on an industrial scale in existing installations: plutonium or uranium fuel derived from enriched processing, fuel from Creys Malville and Brennilis;
- EDF's share of the costs of studies, coverage, shutdown and surveillance of storage centres:
  - existing centers, for very low-level waste, and low and medium-level waste,
  - new centers to be opened, for long-life low-level waste and long-life medium and high-level waste.

The volumes of waste concerned by provisions include packages of existing waste and all waste to be conditioned, resulting from decommissioning or spent fuel processing at La Hague (based on all fuel in reactors at December 31, burnt or otherwise).

These volumes are regularly reviewed, in keeping with the data declared for the purposes of the national waste inventory undertaken by the French agency for radioactive waste management ANDRA (Agence Nationale pour la gestion des Déchets Radioactifs).

For waste resulting from decommissioning of plants in operation, the accounting treatment is identical to the treatment of decommissioning expenses, with recognition of an asset corresponding to the provision.

For future waste that will result from fuel currently in reactors but not yet irradiated, provisions are booked against an increase in the cost of the fuel included in inventories.

The provision for long-life medium and high-level waste is the largest component of the provisions for long-term radioactive waste management. The French Law of June 28, 2006 on the sustainable management of radioactive materials and waste has confirmed EDF's assumption of geological storage. Provisions are based on that assumption.

Since 2005, the gross value and disbursement schedules for forecast expenses have been based on a scenario of industrial geological waste storage, following conclusions presented in the first half of 2005 by the task force set up by the French department for Energy and Raw Materials (Direction Générale de l'Energie et des Matières Premières – DGEMP) comprising members representing the relevant government departments (DGEMP, the French State investment agency APE and the Budget Department), ANDRA and the producers of waste (EDF, AREVA, CEA). The approach applied by EDF to the working party's conclusions is reasonable and coherent with information available internationally.

Regarding the provision for long-life low-level waste, ANDRA began to seek a storage site in 2008. New information has been released, including a revised schedule for development and commissioning of ANDRA's storage site for long-life low-level waste, currently expected for 2019. EDF has taken this information into consideration in estimating its provisions and dedicated assets at December 31, 2008.

## **Provisions for decommissioning and last cores**

The change in decommissioning and last core provisions breaks down as follows:

	2007	Increases Decreases		eases	Other	2008	
(in millions of Euros)		Operating	Financial (1)	Utilization	Reversals		
Decommissioning provisions for fossil-fired plants	420	12	21	(31)		12	434
Decommissioning provisions for nuclear plants (2)	9,974	115	493	(273)		51	10,360
Provisions for last cores (3)	1,701	-	85		(111)		1,675
TOTAL	12,095	127	599	(304)	(111)	63	12,469

<sup>(1)</sup> Financial expenses related to discounting.

The corresponding expenses are estimated based on the economic conditions at year-end, and spread over a forecast disbursement schedule. A provision is booked at a discounted value at the year-end (using a 2% inflation and a 5% discount rates).

	200	08	2007		
(in millions of Euros)	Costs based on economic conditions at year-end	Amounts in provisions at present value	Costs based on economic conditions at year-end	Amounts in provisions at present value	
Decommissioning provisions for fossil-fired plants	609	434	602	420	
Decommissioning provisions for nuclear plants	20,452	10,360	19,792	9,974	
Provisions for last cores	3,566	1,675	3,594	1,701	
TOTAL PROVISIONS FOR DECOMMISSIONING AND LAST CORES	24,627	12,469	23,988	12,095	

## 29.2.1 Decommissioning provisions for fossil-fired power plants

The expenses related to decommissioning of fossil-fired power plants are determined according to regularly updated studies based on estimated future costs, measured by reference to the charges recorded on past operations and the most recent estimates for plants still in operation.

For plants still in operation, an asset is recorded against the provision.

Revision of the assumptions concerning certain decommissioning work and the commissioning of new generation facilities in 2008 explain the increase in provisions.

## 29.2.2 Decommissioning provisions for nuclear power plants

These provisions concern the decommissioning of pressurized water reactor (PWR) nuclear power plants currently in operation and nuclear power plants that have been permanently shut down.

The 2008 annual update of the three-year report provided for in accordance with the requirements of the Law for Secure Financing of nuclear expenses identified certain peripheral regulated nuclear installations (Installations nucléaires de base) that are operationally integrated into larger groups of facilities. Adequate adjustments to provisions and the associated assets have been recorded in the 2008 financial statements, except in respect of three regulated nuclear installations associated with PWR plants currently in operation. Adjustments for those facilities are due to be assessed in 2009, as part of the general review of provision values in connection with decommissioning of the PWR fleet.

The impact in 2008 of adjustments resulting from the three-year report, including revision of assumptions concerning contractor quotes for decommissioning of plants that have been permanently shut down (see below) led to a €164 million increase in the provision and recognition of a corresponding asset for €52 million.

#### FOR NUCLEAR POWER PLANTS CURRENTLY IN OPERATION (PWR PLANTS WITH 900 MW, 1,300 MW AND N4 REACTORS)

A study undertaken in 1991 by the French Ministry of Trade and Industry estimated a benchmark cost, confirming the assumptions defined in 1979 by the PEON commission, estimating decommissioning costs (including long-term management of waste) at approximately 15% of investment expenditure as a ratio to net continuous power. This estimate was in turn confirmed by further studies focusing on a specific site, carried out in 1999. The underlying assumption is that once decommissioning is complete, the sites will be returned to their original state and the land reused.

<sup>(2)</sup> Reversals include €112 million as a result of the EDF-CEA agreement on decommissioning of the Phénix facilities.

<sup>(3)</sup> Most of this reversal relates to the EDF-AREVA framework agreement signed in December 2008.

The estimated schedule for future disbursements is based on the decommissioning plans drawn up by EDF experts, which take into account all known statutory and environmental regulations applicable, together with an uncertainty factor inherent to the fact that payments will only be made in the long term.

At December 31, 2008, the provision also includes expenses related to the Chinon irradiated materials facility (Atelier des Matériaux Irradiés), for which the estimate was increased in 2008.

An asset corresponding to the provision is recognized under the accounting policies described in note 1.15.

An asset is also recorded in the form of accrued receivables to recognize the share of decommissioning costs for the Cattenom 1-2 and Chooz B 1-2 PWR plants to be borne by foreign partners, in proportion to their investment.

#### FOR PERMANENTLY SHUT-DOWN NUCLEAR POWER PLANTS (FIRST-GENERATION UNGG POWER PLANTS AND OTHER PLANTS **INCLUDING CREYS-MALVILLE)**

The provision is based on the cost of work already completed and on studies, contractor quotes and a comparison made by EDF. Forecast disbursements, based on internally-prepared schedules, are adjusted to reflect inflation, then discounted.

At December 31, 2008, contractor quotes and the schedule for decommissioning of permanently shut-down nuclear plants were revised following the change in the planned opening date for the graphite storage centre (put back from 2013 to 2019), revision of the technical and financial assumptions and inclusion of a peripheral installation.

Finally, the negotiations between EDF and CEA over decommissioning of the Brennilis and Phénix facilities and the future of spent fuel from the two plants resulted in an agreement signed in December 2008:

- EDF will manage and bear the full cost of operations related to Brennilis;
- the CEA will manage and bear the full cost of operations related to Phénix;
- long-term management of waste resulting from final shutdown and dismantling that cannot be removed immediately remains the responsibility of both parties, in proportion to their initial investment.

The CEA will make a payment to EDF in full and final settlement of all amounts due in relation to Brennilis, and EDF will do the same to the CEA in respect of Phénix.

Consequently, the provision covering EDF's obligation for decommissioning of Phénix and the corresponding receivable on the CEA for Brennilis have been cancelled.

#### 29.2.3 Provision for last cores

For EDF, this provision covers expenses related to the future loss on unused fuel following the final reactor shutdown. It comprises two types of expenses:

- write-down of the inventory of fuel in the reactor that will not be totally burnt up when the reactor is shut down, valued at the average price of components in inventories at November 30, 2008;
- the cost of fuel reprocessing and the corresponding waste disposal and storage costs for fuel not yet burnt at the time the plant shuts down. These costs are valued based on parameters at December 31, 2008 for provisions for spent fuel management and long-term radioactive waste management.

Since this provision relates to an obligation that existed at the commissioning date of the nuclear unit containing the core, all costs are fully covered by a provision and an asset associated with the provision is recognized.

# 29.3

## Secure financing of long-term obligations

#### 29.3.1 Discount rate

EDF applies a discount rate of 5% in calculating its provisions, together with assumed inflation of 2%, resulting in an effective rate of close to 3%.

#### CALCULATION OF THE DISCOUNT RATE

The discount rate is determined based on long series data for a sample of bonds with maturities as close as possible to that of the liability. However, some expenses covered by these provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The assumption of the nominal rate is currently appropriate for the duration of nuclear commitments, especially in view of the French 2055 treasury bond. The average return on 50-years French treasury bonds is not currently available over a sufficient duration. The benchmark used to determine the discount rate is the sliding average over 10 years of the return on French treasury bonds over longer time horizons, plus the spread of corporate bonds rated A to AA, which include EDF.

The assumed inflation rate used is coherent with the forecasts provided by consensus and expected inflation based on the returns on inflation-linked

#### **REVISION OF THE DISCOUNT RATE**

The methodology used to calculate the discount rate aims to smooth shortterm market effects in order to reflect only long-term trends in rates. It has led to use of a constant discount rate in determining provisions for nuclear commitments since the first application of CRC regulation n° 2000-06 on liabilities at January 1, 2002. When first calculated, the discount rate was set below contemporary market levels in anticipation of a probable decline in rates. The discount rate is revised on the basis of structural developments in the economy, leading to medium- and long-term changes.

#### DISCOUNT RATE AND REGULATORY LIMIT

The discount rate applied respects both these limits.

The decree of February 23, 2007 and the decision of March 21, 2007 impose a double limit on the discount rate: it must be below a regulatory maximum "equal to the arithmetic average over the forty-eight most recent months, of the constant 30-year rate (TEC 30 ans), observed on the last date of the period concerned, plus one point", and it must also be below the expected rate of return on assets covering the liability.

## 29.3.2 Sensitivity factors in provisions for the back-end nuclear cycle and provisions for decommissioning and last cores

Since the measurement of all the provisions described in notes 29.1 and 29.2 is sensitive to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules, a revised estimate is established at each closing date to ensure that the amounts accrued correspond to the best estimate of the costs eventually to be borne by the company. Any differences resulting from these revised estimates could entail changes in the amounts accrued.

This sensitivity to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules can be estimated through comparison of the gross amount estimated under economic conditions for December of the year concerned with the discounted value of the

This approach can be complemented by estimating the impact of a change in the discount rate on the discounted value.

In application of article 11 of the decree of February 23, 2007, the following table reports these details for the main components of provisions for the back-end nuclear cycle, decommissioning of nuclear plants and last cores:

	Amount in	provisions		Sensitivity to discount rate			
	at pres	at present value		08	200	7	
(in millions of Euros)	2008	2007	0.25%	-0.25%	0.25%	-0.25%	
Back-end of nuclear cycle							
Spent fuel management	8,553	10,759	(189)	201	(212)	225	
Long-term radioactive waste management	6,158	5,901	(378)	430	(356)	404	
<b>Decommissioning and last cores</b>							
Decommissioning of power plants	10,360	9,974	(539)	574	(516)	550	
Last cores	1,675	1,701	(79)	85	(85)	91	
TOTAL	26,746	28,335	(1,185)	1,290	(1,169)	1,270	

### 29.3.3 Dedicated assets

In order to secure financing of long-term obligations in the context of an increasingly open electricity markets, EDF has progressively built up a portfolio of financial assets dedicated to covering long-term nuclear obligations, specifically the decommissioning of nuclear power plants and the long-term storage of radioactive waste. The management and governance of these funds comply with the Law of June 28, 2006 on secure financing of nuclear expenses and its implementing provisions.

In view of market conditions, these allocations have been suspended since September 2008. They will be resumed as soon as market conditions have stabilized, and adjustments will be made at that time to comply with the regulatory requirement that liabilities need to be fully covered by the portfolio by June 2011.

The cash allocation to dedicated assets for 2008 amounts to €1,785 million. Withdrawals totalling € 266 million were made to cover EDF's cash needs to the extent of reversals of provisions for disbursements in connection with the related obligations.

At December 31, 2008, the fair value of the dedicated asset portfolio amounts to €8,658 million (€8,604 million at December 31, 2007).

## **Provisions for employee benefits**

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Changes in provisions for employee benefits were as follows:

	2007	Impact of	Impact of Increases		Decreases	2008
(in millions of Euros)		the pension reform at 01.01.2008	Operating (1)	Financial	Utilizations (2)	
Post-employment benefits	9,101	(236)	308	761	991	8,943
Long-term benefits	578	41	21	31	96	575
PROVISION FOR EMPLOYEE BENEFITS	9,679	(195)	329	792	1,087	9,518

<sup>(1)</sup> Including past service cost of €292 million.

# 30.1

## **Provisions for post-employment benefits**

In application of the CNC Emergency Committee opinion n° 2000-A issued on July 6, 2000 and article 355.1 paragraph 2 of the French General Chart of Accounts, EDF opted for recognition of post-employment benefits granted to personnel as of January 1, 2005.

Details of these provisions are shown below:

(in millions of Euros)	2007	Impact of the pension reform	Increases	Decreases	2008
Pensions	7,741	(203)	918	873	7,583
Benefits in kind (electricity/gas)	640	(16)	56	38	642
Retirement gratuities	-	7	46	53	-
Bereavement benefit	164	5	10	6	173
Bonus paid leave	116	-	11	4	123
Cost of studies indemnity	21	(2)	1	2	18
CNIEG administration expenses	397	(27)	24	14	380
Retirement indemnities and pensions for seconded personnel	22	-	3	1	24
TOTAL	9,101	(236)	1,069	991	8,943

<sup>(2)</sup> Including €752 million for benefits paid out and €303 million for the expected return on fund assets.

#### 30.1.1 Pensions

The main measures of the financing reform for the special IEG pension system took effect at January 1, 2005.

Specific benefits earned under the special IEG system are benefits not covered by the standard pension systems. Specific past benefits are specific benefits earned for periods validated at December 31, 2004, and specific future benefits are those earned for periods validated after December 31, 2004.

Specific past benefits for the gas and electricity transmission and distribution activities and public service mission management businesses *i.e.* the regulated or non-competitive activities, are financed by the CTA levy (*Contribution Tarifaire d'Acheminement*).

The direct financing by EDF covers:

- specific past benefits of employees in the "deregulated" or "competitive" activities;
- specific future benefits of employees in the regulated and deregulated activities:
- specific benefits of employees benefiting from early retirement before the standard legal retirement age.

### 30.1.2 Other post-employment benefits

In addition to pensions, other benefits are granted to employees not currently in active service, as detailed below:

#### BENEFITS IN KIND (ELECTRICITY/GAS)

Article 28 of the IEG's national statutes entitles all employees (active or inactive) to benefits in kind in the form of supplies of electricity or gas at the preferential "Employee price". EDF's obligation for supplies of energy to EDF employees corresponds to the probable present value of kWhs supplied to beneficiaries during their retirement, valued on the basis of the unit cost, taking into account the payment received under the energy exchange agreement with GDF SUEZ.

#### RETIREMENT GRATUITIES

Retirement gratuities are paid upon retirement to employees due to receive the statutory old-age pension, or to their dependents if the employee dies before reaching retirement. These obligations are almost totally covered by an insurance policy.

#### **BEREAVEMENT BENEFIT**

The bereavement benefit is paid out upon the death of an inactive or handicapped employee, in order to provide financial assistance for the expenses incurred at such a time (Article 26 § 5 of the National Statutes). It is paid to the deceased's principal dependants (statutory indemnity equal to two months' pension) or to a third party that has paid funeral costs (discretionary indemnity equal to the costs incurred).

#### BONUS PRE-RETIREMENT PAID LEAVE

All employees eligible to benefit immediately from the statutory old-age pension and aged at least 55 at their retirement date are entitled to 18 days of bonus paid leave during the last twelve months of their employment.

### **COST OF STUDIES INDEMNITY**

The cost of studies indemnity is a family benefit not defined by the statutes, intended to provide assistance to inactive employees or their dependents whose children are still in education. It is also paid to beneficiaries of the orphan's pension.

#### **CNIEG ADMINISTRATIVE EXPENSES**

The CNIEG's administrative and financial expenses are paid in varying proportions by all IEG companies.

#### PENSION EQUALIZATION FOR EMPLOYEES ON SECONDMENT

The pension equalization system for employees on secondment is designed to guarantee employees seconded to EDF group companies in or outside France between January 1, 2000 and December 31, 2005 income equivalent to the difference between the amount they would have received under the IEG pension system and the amount they receive or will receive under the mandatory systems to which they were affiliated during their secondment.

#### ADDITIONAL RETIREMENT BONUS

This additional bonus is paid to senior executives when they take retirement and benefit from a statutory old age pension.

## Provisions for other long-term benefits for active employees

Benefits awarded to employees in activity are as follows:

(in millions of Euros)	2007	Impact of the pension reform	Increases	Decreases	2008
Discretionary benefit for asbestos-related illness	11	-	1	2	10
Asbestos-related early retirement	7	-	5	3	9
Long-service awards	70	12	8	17	73
Disability annuities	76	29	18	26	97
Annuities following industrial accident or work-related illness	414	-	20	48	386
TOTAL	578	41	52	96	575

#### DISCRETIONARY BENEFIT FOR ASBESTOS-RELATED ILLNESS

To improve the compensation received by employees with a recognized asbestos-related illness contracted in the course of their employment, EDF pays a discretionary indemnity to the employee or to his dependents if he has died as a result of the illness. The indemnity is equivalent to 20% of the annuity received by beneficiaries or their dependents. For beneficiaries receiving an indemnity under the special IEG system, this indemnity represents 20% of that indemnity, payable in a lump sum.

#### ASBESTOS-RELATED EARLY RETIREMENT

EDF has set up an early retirement system for workers aged at least 50, with no minimum service period requirement, who are officially recognised as affected by an asbestos-related illness contracted in the course of their employment.

#### LONG-SERVICE AWARDS

The financial benefits payable to employees awarded long-service medals vary depending on seniority. The projected unit cost method is used to measure these obligations, which correspond to the probable present value of these benefits when an employee reaches the relevant levels of seniority.

#### **DISABILITY ANNUITIES**

After five years of temporary disability, an employee who cannot resume work for health reasons is declared disabled.

Employees currently in service are entitled to receive an annuity when they are declared disabled by the National Disability Commission (Commission Nationale d'Invalidité) (Article 4 of appendix 3 of the National Statutes). In such a case, they receive a disability pension corresponding to 50% of their most recent salary. An employee may be declared disabled after being on long-term sick leave for 5 years, or after industrial accident or workrelated illness if the employee is declared unemployable. This benefit, paid until retirement age if the employee's health does not improve, cannot be transferred.

#### ANNUITIES FOLLOWING INDUSTRIAL ACCIDENT OR WORK-RELATED ILLNESS

Like their counterparts in the general national system, IEG employees are entitled to financial support in the event of industrial accident or workrelated illness, as stipulated in Book IV of the French Social Security Code. These benefits cover all employees and the dependants of any employee who dies as a result of an industrial accident, an accident on the journey between home and work or work-related illness.

The obligation is measured as the probable present value of future benefits payable to current beneficiaries, including any possible reversions.

## **Actuarial assumptions**

The main actuarial assumptions used for provisions for post-employment benefits and long-term employee benefits under the IEG system are summarized below:

- the discount rate is 5.75% at December 31, 2008 (compared to the previous rate of 5%). Actuarial gains and losses after changes in discount rates rate generated a gain of €773 million at December 31, 2008 (compared to a loss of € 100 million at December 31, 2007);
- the rise in the basic national salary is estimated at 2% excluding inflation;
- pay rise levels independently of the basic national salary were determined by means of observations for the period 1996 to 2003;
- the average residual period of employment is 12.5 years;
- the staff turnover rate is not significant.

# 30.4

## Changes in the discounted value of the obligation and fund assets

## 30.4.1 Change in the value of the obligation and net position

Change in the value of the obligation and net position:

	Obligations under plans		
(in millions of Euros)	Unfunded	Funded	
Present value of the obligation at 01.01.2008	2,926	12,813	
Current year service cost	274	18	
Interest expense	142	650	
Actuarial gains and losses	(22)	(1,376)	
Benefits paid	(266)	(484)	
Past year service cost	(263)	166	
Present value of the obligation at 12.31.2008	2,791	11,787	
Fair value of fund assets	-	(5,738)	
Net position	2,791	6,049	
Actuarial gains and losses	(341)	1,114	
Past year service cost non-vested	(4)	(94)	
NET LIABILITY AT 12.31.2008 INCLUDING:	2,446	7,069	
Provision	2,446	7,072	
Asset	-	(3)	

### 30.4.2 Change in the discounted value of fund assets

Change in the discounted value of fund assets:

(in millions of Euros)

Fair value of fund assets at 01.01.2008	5,968
Expected return on fund assets	303
Net contributions	248
Benefits paid	(247)
Actuarial gains and losses on fund assets	(534)
FAIR VALUE OF FUND ASSETS AT 12.31.2008	5,738

## 30.4.3 Breakdown of the value of fund assets

The expected return on fund assets depends on the expected return on each category of financial assets.

Financial assets were allocated as follows at December 31, 2008:

	indemnities	Pension plan
Shares	41.7%	22.7%
Bonds and monetary assets	58.3%	77.3%

The expected return on long-term financial assets at December 31, 2008 was set at:

- 5.57% for the pension funds;
- 5.52% for retirement gratuities.

## Provision for renewal of property, plant and equipment operated under concession

	2007	Incre	eases	Decre	ases	Other	2008
(in millions of Euros)		Operating expenses	Exceptional expenses	Utilizations	Reversals		
PROVISION FOR RENEWAL	197	13	-	(5)	-	(3)	202

# Note

## **Provisions for other expenses**

Other **Increases Decreases** 2008 2007 Financial (a) **Exceptional Utilizations** (in millions of Euros) Operating Reversals **PROVISIONS FOR** - personnel expenses (1) 750 66 14 49 (84)(8) (194)593 - repairs and maintenance (2) 157 29 (2) 161 (23)- energy delivered, not yet measured or billed 45 12 (37)- other expenses (3) 772 1,394 (512)(77)1 1,578 PROVISIONS FOR OTHER EXPENSES (193) 1,724 1,501 14 49 (656)(87) 2,352

<sup>(</sup>a) Financial expenses related to discounting.

<sup>(1)</sup> Mainly including:

<sup>- € 383</sup> million for the contribution to preserve entitlements (AGIRC, ARRCO);

<sup>-</sup> the €87 million expense booked in connection with the attribution of free shares to employees (ACT 2007) at December 31, 2008. An amount of €194 million was reversed from this provision following the change in accounting method.

<sup>(2)</sup> This concerns the ten-yearly major revision of nuclear and fossil-fired power plants.

<sup>(3)</sup> At December 31, 2008, this includes €1,351 million related to the transition tariff system (TaRTAM), and €126 million to cover expenses related to social security bodies.

## Financial and operating liabilities

	Gross value	Gross value		Maturity	
	at 12.31.2007	at 12.31.2008	Within	2 - 5 years	After
(in millions of Euros)			1 year		5 years
Financial liabilities					
Bonds	3,727	3,679	1,997	1,342	340
Other borrowings (1)	11,147	16,873	5,256	4,389	7,228
Other financial liabilities					
- advances on consumption	152	158	62	86	10
- other	808	914	537	30	347
Sub-total financial liabilities	15,834	21,624	7,852	5,847	7,925
Advances and payments received from customers	3,330	3,765	3,747	18	
Operating, investment and other liabilities					
Trade receivables and related accounts					
- Invoices received	3,307	2,588	2,588		
- Invoices to be received <sup>(2)</sup>	3,728	7,638	6,298	1,340	
Tax and social security (3)	4,364	4,999	4,999		
Debts related to fixed assets and related accounts					
- Invoices received	353	631	631		
- Invoices to be received	506	817	817		
Other liabilities					
- Credit balances on customer accounts	34	46	46		_
- Other credit balances (4)	7,985	7,010	6,797	213	
Sub-total operating, investment and other liabilities	20,277	23,729	22,176	1,553	-
Cash instruments	229	438	438		
Deferred income <sup>(5)</sup>	3,712	3,796	598	928	2,270
TOTAL	43,382	53,352	34,811	8,346	10,195

<sup>(1)</sup> Including €11,613 million of Medium Term Notes (EMTN).

<sup>(2)</sup> Including € 2,009 million for invoicing of the full payment to be made for dismantling the La Hague plant under the EDF-AREVA framework agreement.

<sup>(3)</sup> Including a change of €398 million for CO<sub>2</sub> emission quotas to be surrendered to the French State, due to the rise in prices.

<sup>(4)</sup> Cash pooling and cash management agreements with subsidiaries amount to €5,155 million in 2008, compared to €3,460 million in 2007. The balance of the current account with the subsidiary ERDF is €277 million, compared to €2,346 million at December 31, 2007, and a cash investment agreement was established in 2008

<sup>(5)</sup> Mainly payments made by partners for electricity to be supplied in future years.

## **Financial liabilities**

<b>34.1</b> Changes in financial liabilities before swaps	457
<b>34.2</b> Breakdown of loans by currency, before and after swaps	458
<b>34.3</b> Breakdown of loans by type of interest rate before and after swaps	458

# 34.1

## Changes in financial liabilities before swaps

	Balance at	New	Repayments	Translation	Other	Balance at
(in millions of Euros)	12.31.2007	borrowings		adjustments		12.31.2008
Bonds						
in Euros	3,540		988			2,552
in other currencies	187	872	2	70		1,127
Sub-total 1	3,727	872	990	70	-	3,679
Other borrowings and securitisation of receiv	ables					
French commercial paper in Euros (BTR) (1)	3,797	174				3,971
Commercial paper in foreign currencies (2)	2,036		962	207		1,281
Euro-Medium Term Notes (EMTN) in Euros	4,070	5,300				9,370
Euro-Medium Term Notes (EMTN) in other currencies	s 1,236	1,342	132	(203)		2,243
Contractual financial borrowings (2)	8		4		4	8
Sub-total 2	11,147	6,816	1,098	4	4	16,873
Total borrowings 1+2	14,874	7,688	2,088	74	4	20,552
Advances on consumption	152	-	-	-	6	158
Miscellaneous advances	449				3	452
Bank overdrafts	11				30	41
Deferred bank debits	117				(78)	39
Interest payable	231				151	382
Total other financial liabilities	808	-	-	-	106	914
TOTAL FINANCIAL LIABILITIES	15,834	7,688	2,088	74	116	21,624

<sup>(1)</sup> Issues are reported net of repayments for the period.

In 2008, EDF undertook several bond issues totalling €7,514 million bought by French and international institutional investors. Details are as follows:

- €1,500 million at the fixed rate of 5% maturing in 2018;
- € 600 million at the fixed rate of 5% maturing in 2014;
- €1,200 million at the fixed rate of 5.375% maturing in 2020;
- €2,000 million at the fixed rate of 5.625% maturing in 2013;
- £500 million (€ 629 million) at the fixed rate of 6.25% maturing in 2028;
- JPY 40,000 million (€ 240 million) at the variable rate of 3-month JPY LIBOR maturing in 2013;
- CHF1,350 million (€ 872 million) at the fixed rate of 3.38% maturing
- £400 million (€473 million) at the fixed rate of 6.875% maturing in 2022.

<sup>(2)</sup> Repayments are reported net of issues for the period.

## Breakdown of loans by currency, before and after swaps

	Struc	ture of liabil	ity in balance s	sheet	Impact of swaps Struc			ructure of lial	ucture of liability after swaps		
	Non-	In	%	%	Non-	In	Non-	In	%	%	
(in millions)	Euro	Euros	non-Euro	of debt	Euro	Euros	Euro	Euros	non-Euro	of debt	
I - In Euros		15,915		77		3,500		19,415		94	
II - Non-Euro											
CHF	1,750	1,178	25	6	(1,750)	(1,178)	-	-	-	-	
GBP	1,552	1,647	36	8	(804)	(844)	748	803	60	4	
JPY	62,300	494	11	2	(62,300)	(494)	-	-	-	-	
USD	1,833	1,318	28	7	(1,098)	(789)	735	529	40	2	
Total II		4,637	100	23		(3,305)		1,332	100	6	
TOTAL I + II		20,552		100		195		20,747		100	

The nominal value of swaps included in commitments has no effect on loans in the balance sheet. The effect of swaps on loans in Euros was an increase of  $\in$  3,500 million, and a decrease of  $\in$  3,305 million for loans in other currencies outside the Euro zone. The volume of long-term loans is therefore increased by €195 million, from €20,552 million to €20,747 million. Loans after swaps and unallocated swaps generated an unrealized exchange gain of €111 million.

# 34.3

# Breakdown of loans by type of interest rate before and after swaps

	Structure of liability in balance sheet		Impact of swaps	Structure of liability after swaps			
(in millions of Euros)	Total	% 12.31.2008	% 12.31.2007	Total	Total	% 12.31.2008	% 12.31.2007
Fixed rates							
Long-term borrowings and EMTN	14,863			(1,320)	13,543		
Short-term borrowings	4,993			(3,970)	1,023		
Total borrowings at fixed rate	19,856	97	94	(5,290)	14,566	70	60
Floating rates							
Long-term borrowings and EMTN	437			1,547	1,984		
Short-term borrowings	259			3,938	4,197		
Total borrowings at floating rate	696	3	6	5,485	6,181	30	40
TOTAL	20,552	100	100	195	20,747	100	100

## **Financial instruments**

35.1 Impacts of financial instrument transactions on net income

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**35.2** Fair value of derivative financial instruments

460

EDF uses financial instruments to limit the impact of the foreign exchange rate risk on equity and the income statement, and to hedge its interest rate risk.

	12.31.	2008	12.31.2007	
(in millions of Euros)	To be received (notional)	To be given (notional)	To be received (notional)	To be given (notional)
1- Interest rate transactions	(Hotional)	(Hotionat)	(Hotional)	(Hothonat)
Currencies other than the Euro				
Purchases of FRA GBP contracts	21			
Interest rate swaps - short-term	21			
In Euros	3,675	3,675	3,989	3,989
In other currencies	3,073	3,075	3,909	3,969
GBP	382	382	968	968
USD	502	302	769	769
Interest rate swaps - long-term			, 03	, 03
In Euros	2,814	2,814	2,295	2,295
In other currencies	2,014	2,014	2,233	2,233
CHF	202	202	181	181
GBP	420	420		
Sub-total	7,514	7,493	8,202	8,202
2- Exchange rate transactions (Euro value of currencies committed)		-7.00	5,252	3,232
Forward transactions				
EUR	4,061	4,608	1,291	2,213
CAD	1,001	2	1,231	2,213
USD	2,810	729	3,246	14
GBP	718	2,362	535	2,913
CHF	784	481	45	45
HUF	217	217		
PLN	251	256	49	71
Currency options				
Purchases of options				
EUR	35	74	728	828
GBP			341	341
HUF			228	228
PLN	68	31	172	172
USD			68	
Sales of options				
EUR	37	70	831	795
GBP			341	341
HUF		24	228	228
PLN	68	31	172	172
USD			68	68
Currency swaps - long-term	2.641	7.000	2.007	4.566
EUR JPY	3,641 494	7,862	3,097 166	4,566
USD	494	410	421	387
GBP	4,651	2,199	2,725	1,833
CHF	875	۷, ۱۶۶	458	261
HUF	0/3		730	201
PLN	120	120	210	210
AUD	120		90	210
Sub-total	19,329	19,452	15,510	15,686
3- Securitization swaps	1,628	1,628	1,674	1,674
TOTAL FINANCIAL OFF BALANCE SHEET COMMITMENTS	28,471	28,573	25,386	25,562

The amounts shown in the above table represent the notional capital amount, translated where necessary using year-end exchange rates.

## Impacts of financial instrument transactions on net income

### 35.1.1 Forward and futures transactions

(in millions of Euros)	2008	2007
Instruments hedging long-term liabilities		
Long-term swaps, caps and floors	(27)	(168)
Hedging instruments used in cash management		
Interest rate instruments	9	4
Exchange rate instruments	930	(23)
TOTAL	912	(187)

### 35.1.2 Investments

(in millions of Euros)	2008	2007
Marketable securities	98	437
Short-term cash investments	(834)	(194)
Investment securities	547	580
TOTAL	(189)	823

# 35.2

## Fair value of derivative financial instruments

The fair value of currency and interest rate swaps was calculated by discounting future cash flows using year-end market exchange and interest rates, over the remaining term of the contracts (market value includes accrued interest).

The book value of off-balance sheet derivatives includes accrued interest, equalization payments and premiums paid or received, and translation adjustments, which are already booked in EDF's accounts. The difference between book value and market value is the unrealized deferred gain or loss.

The fair value of derivative financial instruments reported off-balance sheet at December 31, 2008 as calculated by EDF is as follows:

(in millions of Euros)	Book value	Fair value
Interest rate hedges		
Long-term and short-term swaps, caps and floors	3	69
Exchange rate hedges		
Forward exchange transactions	205	205
Long-term and short-term currency swaps <sup>(1)</sup>	(385)	3
TOTAL	(177)	277

<sup>(1)</sup> Numerous currency swaps have EDF International as counterpart, and the foreign exchange positions concerned have been reversed since this subsidiary carries the assets in foreign currencies.

## **Off-balance sheet commitments**

<b>36.1</b> Off-balance sheet commitments given	461
<b>36.2</b> Off-balance sheet commitments received	462
<b>36.3</b> Other types of commitments	463

At December 31, 2008, off-balance sheet commitments related to operations, financing and investments (other than electricity supply commitments and partnership agreements) comprised the following:

	Total		Maturity	
(in millions of Euros)		< 1 year	1 - 5 years	> 5 years
Off-balance sheet commitments given	57,525	11,534	20,494	25,497
1 - Operating commitments				
Commitments related to commercial contracts	41,191	4,248	12,124	24,819
Commitments related to orders for operating items and fixed assets	6,638	3,379	3,089	170
Other operating commitments	2,443	754	1,428	261
2 - Financing commitments	3,210	547	2,416	247
3 - Investment commitments	4,043	2,606	1,437	
Off-balance sheet commitments received	28,805	12,576	16,002	227
1 - Operating commitments	11,231	6,798	4,216	217
2 - Financing commitments	17,574	5,778	11,786	10

# 36.1

## Off-balance sheet commitments given

## 36.1.1 Operating commitments

#### **36.1.1.1 FIRM IRREVOCABLE PURCHASE COMMITMENTS**

In the course of its generation and supply activities, EDF has entered into long-term and "take or pay" contracts involving commitments to purchase commodities, energy, gas and nuclear fuel for periods of up to 20 years.

In almost all cases, these are reciprocal commitments, and the third parties concerned are under an obligation to supply or purchase the quantities specified in the contracts.

At December 31, 2008, firm irrevocable purchase commitments mature as follows (in millions of current Euros):

	Total		<u>Maturity</u>			
(in millions of Euros)		< 1 year	1-5 years	> 5 years	> 10 years	
Purchases of electricity	16,124	1,979	3,007	3,024	8,114	
Purchases of gas and other energies	6,302	948	3,314	1,722	318	
Purchases of nuclear fuels	18,765	1,321	5,803	5,180	6,461	
PURCHASE COMMITMENTS	41,191	4,248	12,124	9,926	14,893	

### **Financial** statements

#### **ELECTRICITY PURCHASES**

Electricity purchase commitments mainly concern:

- electricity purchases for Island Energy Systems (IES), which undertook in 2008 to purchase electricity generated by the plants of EDF's PEI subsidiaries;
- hedging contracts. These are forward purchases, for which the volumes and prices are set in contracts with EDF Trading.

In addition, under article 10 of the Law of February 10, 2000, in mainland France EDF is obliged, at the producer's request and subject to compliance with certain technical features, to purchase the power produced by co-generation plants and renewable energy generation units (wind turbines and small hydro-electric plants) or operations recycling organic waste.

Most of these commitments concern purchases from co-generation plants, and to a lesser degree purchases from wind farms and hydropower plants and purchases of electricity produced by waste-burning.

The purchase volumes for 2008 totalled 26.6 TWh, including 14 TWh for co-generation, 5 TWh for wind power, 4 TWh for hydropower.

The additional costs generated by this obligation are offset, after validation by the CRE, by the Contribution to the Public Electricity Service (Contribution au Service Public de l'Électricité or CSPE) introduced by the Law 2003-8 of January 3, 2003.

#### GAS AND OTHER ENERGY PURCHASES

Gas purchases for supply and delivery are mostly undertaken through longterm contracts.

Purchase commitments for other energies and commodities mainly concern coal and oil used to operate the fossil-fired plants.

#### **NUCLEAR FUEL PURCHASES**

Commitments for purchases of nuclear fuel arise from supply contracts for the nuclear plants designed to cover EDF's needs for uranium, enrichment and fluoration services and fuel assembly production. The increase in commitments results partly from the signature of new contracts raising the volume and period of coverage of EDF's supply needs, and partly from revaluation of uranium supply costs.

#### **36.1.1.2 COMMITMENTS RELATED TO ORDERS FOR OPERATING** ITEMS AND FIXED ASSETS

These are reciprocal commitments totalling €6,638 million undertaken upon signature of orders for fixed assets and operating items, or orders currently in progress, which include €1,743 million for the construction of the EPR plant at Flamanville.

#### 36.1.1.3 OTHER OPERATING COMMITMENTS

These are mostly commitments by EDF as lessee under irrevocable operating lease contracts for premises, equipment and vehicles used in the course of its business. The corresponding payments are subject to renegotiation at intervals defined in the contracts.

### **36.1.2** Financing commitments

These are commitments by EDF to subsidiaries, primarily €1,890 million to EDF Energy, and € 500 million to EDF Trading.

EDF has also granted a \$600 million interim borrowing facility to Constellation Energy Group.

### **36.1.3** Commitments linked to investment

Agreement with Veolia Environnement: Veolia Environnement has granted EDF a call option on all its Dalkia shares in the event that a competitor of EDF would take control over Veolia Environnement. EDF has also granted Veolia Environnement a call option over all its Dalkia shares in the event of a change in EDF's statutes and if a competitor of Veolia Environnement were to take control over EDF, individually or with other parties. If the parties fail to agree on the sale price of the shares, it would be fixed by an independent expert.

In connection with the agreements signed in December 2008 by EDF Development Inc. and Constellation Energy Group, EDF provided a guarantee for payment of the obligations of the subsidiary (\$5.6 billion).

# 36.2

## Off-balance sheet commitments received

### 36.2.1 Operating commitments

These mainly concern:

- reciprocal commitments totalling € 6,933 million, including € 6,638 million on orders for operating items and fixed assets;
- commitments received from insurance companies to cover risks related to construction of the EPR-type nuclear plant, for €2,843 million;
- greenhouse gas emission quotas still receivable for the period 2009-2012, at € 772 million (46.4 million tonnes of CO<sub>2</sub>). Following the amended finance law for 2008, quotas allocated by the French State for this period decreased by €20 million.

## 36.2.2 Financing commitments

These commitments, corresponding to the value of credit lines available to EDF from different banks, total €17,549 million. This includes £11,000 million for the syndicated loan contracted for the acquisition of British Energy.

## Other types of commitments

### 36.3.1 Electricity supply commitments

EDF has signed several long-term contracts with a number of European electricity operators, undertaking to supply electricity. These contracts are of two types:

- co-financing agreements for nuclear power plants, either for a specific plant or for a defined group of plants. Companies participating in this financing are entitled to a share of the power generated by the plants concerned, in proportion to their initial contribution;
- long-term commercial sales contracts, generally covered by the nuclear power plants.

When investing in EnBW in 2001, EDF made a commitment to the European Commission to make some of its generation capacity available to the market for an initial duration of 5 years, in principle until February 7, 2006. The purpose of this arrangement was to facilitate competitors' access to the French market, to make up for supply difficulties on the emerging French market over the early years.

Since February 2006, EDF has had the right to file a documented application to withdraw from this auction procedure, but has chosen not to exercise this right to date. After discussions with the European Commission and upon a proposal by EDF, the Commission authorized certain adjustments to the auction process, primarily by introducing baseload products for a period of 4 years, on sale since September 2006, although the volume of energy made available annually by EDF is unchanged. In 2008, slightly more than 43 TWh was thus made available on the market (40 TWh in 2007). The auctions continue today on a quarterly basis.

Following the dispute between EDF and Direct Énergie, the French competition authorities issued a ruling on December 10, 2007 accepting and obligating EDF's proposed commitments to make a significant volume of electricity (1,500 MW, i.e. approximately 10 TWh per year up to 15 years) available to alternative suppliers in France at prices, enabling them to compete effectively with EDF's offers on the deregulated mass market. EDF proposed to apply an average supply price of €36.8/MWh in current Euros for the initial 5-year period, 2008-2012. This price will rise progressively to reach €47.2/MWh in 2012. For the second 10-year period, the price is to be fixed at a level that covers EDF's development costs for the Flamanville EPR.

EDF thus undertook 2 calls for tender for baseload electricity supply contracts on March 12, 2008 and November 19, 2008. The contracts concerned cover a total of 500 MW each, for a period up to fifteen years. The final call for tender will be organised in the second half-year of 2009.

### 36.3.2 Partnership between EDF and Enel

On November 30, 2007, EDF and Enel signed a strategic partnership agreement, under which Enel bears a 12.5% share in all construction, operation, decommissioning and back-end nuclear cycle management expenses for the Flamanville 3 EPR-type nuclear plant, in return for access to 12.5% of the electricity generated by the EPR over its lifetime. The plant's nuclear operator is EDF, which bears full responsibility for its operations.

The partnership agreement also gives Enel the option of progressively acquiring the electricity generated by EDF's nuclear plants, up to a total capacity of 1,200 MW.

## Note

## **Environment**

37.1 Greenhouse gas emission quotas

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**37.2** Energy savings certificates

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37.3 Carbon Fund

464

# 37.1

## **Greenhouse gas emission quotas**

EDF has been allocated greenhouse gas emission quotas since 2005.

EDF's total quotas allocation for 2008 is 16.5 million tonnes (23.5 million tonnes for 2007). The volume of emissions at December 31, 2008 stood at 17.6 million tonnes (20 million tonnes at December 2007).

The greenhouse gas emission quotas receivable for the period 2009-2012 amount to 46.4 million tonnes.

## **Energy savings certificates**

In application of French Law 2005-781 of July 13, 2005 defining the major lines of the national energy policy, which introduced a system of energy savings certificates for legal entities selling electricity, gas, heat or cold to end-users, and CNC emergency committee opinion 2006-D of October 4, 2006 defining the relevant accounting treatment under French GAAP, EDF's financial statements reflect the management of energy savings certificates.

The energy savings obligations required of EDF for the three-year period July 1, 2006 to June 30, 2009 amount to 29,849 GWh in final energy cumulated and discounted ("cumac").

EDF has organized energy-efficient offers on each market segment in order to meet the obligations attributed by decision of October 17, 2007. Results at December 31 are in line with the current company's plan. At that date, EDF held energy savings certificates for 22,687 GWh cumac, and a further 2,650 GWh cumac are expected after processing of applications submitted to the authorities.

# **37.3**

## **Carbon Fund**

In November 2006, EDF set up a Carbon Fund to diversify its policy for obtaining greenhouse gas emission quotas and thereby reinforce its capacity to honor its environmental commitments in optimum economic conditions.

The aim of this fund is to support projects to reduce greenhouse gas emissions in emerging countries (in Asia and Latin America, for example) as part of the Clean Development Mechanism defined in the Kyoto protocol, and to obtain emission permits known as carbon emission reduction (CER) credits.

The Carbon Fund involves EDF and some of its European entities (EDF Energy, Edison, EnBW and EDF Trading), which will use the CER credits obtained. Credits can be surrendered in replacement of greenhouse gas emission quotas up to a certain limit, fixed at a percentage of the allocation from each State: 13.5% under the current National Quota Allocation

EDF's Carbon Fund is managed by EDF Trading, which develops and negotiates CER credit purchase contracts.

The Carbon Fund has no significant impact on EDF's financial statements at December 31, 2008.

# Note

## **Management compensation**

The key management personnel are the Chairman of the Board of Directors, the Chief Officers and the external members of the Board of Directors.

The total gross compensation paid by EDF (salaries, director's fees and all types of benefits, excluding employer contributions) to the company's key management personnel for 2008 was as follows:

(in millions of Euros)	2008	2007
Group's management	3,255,771	3,503,269
Governance bodies	148,250	125,250

## **Subsequent events**

<b>39.1</b> Acquisition of British Energy	465
<b>39.2</b> Bond issues	465
39.3 Construction of a second EPR	465
<b>39.4</b> Investment in Alpiq Holding SA	465

# **39.1**

## **Acquisition of British Energy**

The purchase offer made by Lake Acquisitions Ltd to the shareholders of British Energy was successfully concluded on January 5, 2009 once all the conditions of the offer were fulfilled.

Taking into consideration the shares already acquired by Lake Acquisitions Ltd on September 24, 2008, Lake Acquisitions Ltd's final holding totals 96.44% of British Energy's issued share capital.

# 39.2

### **Bond issues**

On January 23, 2009 EDF issued two bonds in Euros. The first is a 6-year bond totalling €2 billion, with annual coupon of 5.125%. The second is a 12-year bond totalling €2 billion with annual coupon of 6.25% On January 26, 2009, EDF issued a \$5 billion bond on the US market in the form of a private placement reserved for institutional investors (issue governed by Rule 144A of the US Securities and Exchange Commission), in three tranches: • a 5-year \$1.25 billion tranche with coupon of 5.50%;

- a 10-year \$2 billion tranche with coupon of 6.50%;
- a 30-year \$1.75 billion tranche with coupon of 6.95%.

These operations contribute to financing of the Group's strategy and early repayment of the bank loan contracted to acquire British Energy, used in January 2009.

# 39.3

## Construction of a second EPR

The French government confirmed on January 30, 2009 that it intends to construct a second EPR in a project led by EDF at Penly in Normandy.

EDF will work on this second French EPR with other industrial groups, particularly GDF SUEZ, through partnerships.

EDF will present the project to its governing bodies.

# **39.4**

## **Investment in Alpiq Holding SA**

On December 19, 2008, the Swiss energy groups Atel and EOS announced their intention to merge to form an entity named ALPIQ Holding SA, with the aim of creating a new energy operator in Switzerland.

Under the terms of agreements between EDF, EOS and CSM (a consortium of historical shareholders in Atel Holding), EDF held a 25% share in ALPIQ Holding SA by the end of January 2009.

The total cost of the transaction for EDF is CHF1,057 million. In order to finance it, EDF contributed to ALPIQ Holding SA the energy rights deriving from its 50% holding in the Emosson dam on the French-Swiss border, valued at CHF720 million. The balance of CHF337 million was paid through a cash contribution.

## **Statutory Auditors' Report** on the financial statements

This is a free translation into English of the Statutory Auditors' Reports issued in the French language and is provided solely for the convenience of English speaking readers. The Statutory Auditors' Report includes for the information of the reader, as required under French law in any auditor's report, whether qualified or not, an explanatory paragraph separate from and presented below the audit opinion discussing the auditors' assessment of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account caption or on information taken outside of the financial statements. The report also includes information relating to the specific verification of information in the group management report.

This report should be read in conjunction with, and is construed in accordance with French law and professional auditing standards applicable in France.

#### YEAR ENDED DECEMBER 31, 2008

To the Shareholders,

Following our appointment as Statutory Auditors by your Annual General Meeting, we hereby report to you for the year ended December 31, 2008 on:

- the audit of the accompanying financial statements of Électricité de France SA;
- the justification of our assessments :
- the specific verifications and information required by law.

These financial statements have been approved by the Board of Directors. Our role is to express an opinion on these financial statements, based on our audit.

#### 1. OPINION ON THE FINANCIAL STATEMENTS

We conducted our audit in accordance with professional standards applicable in France. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, using sample testing techniques or other selection methods, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statements presentation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

In our opinion, the financial statements give a true and fair view of the Company's financial position and its assets and liabilities, as of December 31, 2008 and the results of its operations for the year then ended in accordance with accounting rules and principles applicable in France.

Without qualifying our opinion, we draw your attention to:

- the valuation of long-term provisions relating to nuclear electricity production, as described in notes 1.15 and 29, which results as indicated in note 1.3 from Management best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning;
- note 1.2 to the financial statements, which describes the changes in accounting methods relating to the accounting treatment applied to the free share plans for employees, in application of the French National Accounting Council opinion (Conseil National de la Comptabilité) # 2008-17 dated November 6, 2008.

#### 2. JUSTIFICATION OF ASSESSMENTS

In accordance with the requirements of Article L. 823-9 of the French Commercial Law (Code de commerce) relating to the justification of our assessments, we bring to your attention the following matters:

#### ACCOUNTING PRINCIPLES AND POLICIES

Notes 1.4, 1.8 and 1.16 to the financial statements describe the principles and policies used for the accounting and valuation of revenues related to energy delivered but not yet measured nor billed, valuation of financial investments and valuation of provisions for employee benefits.

As part of our assessment of the Company's accounting principles and methods, we have verified the appropriateness of the accounting methods used by the Company and of the information disclosed in the notes to the financial statements, and we verified the accuracy of the implementation of these accounting methods.

We have also verified the appropriateness of the change in accounting methods described above and of the related information disclosed.

#### **ACCOUNTING ESTIMATES**

Notes 1.15 and 28 and 1.16 and 29, respectively, disclose the underlying assumptions on which the valuation of long-term provisions relating to nuclear electricity production and the valuation of provisions and obligations for employee benefits are based. We have assessed the methodology used by the Company and, based on information available, verified whether the policies used for these estimates are reasonable.

In the current highly volatile market environment and the undeniable difficulty in determining the future economic outlook, we have also assessed the reasonableness of the data used and assumptions made with respect to the valuation of the financial assets.

These assessments were made in the context of our audit of the financial statements taken as a whole and contributed to the formation of our opinion expressed in the first part of this report.

#### 3. SPECIFIC VERIFICATIONS AND DISCLOSURES

We have also performed the specific verifications required by law in accordance with professional standards applicable in France.

We have no matters to report regarding:

- the fair presentation and the consistency with the financial statements of the information given in the management report of the Board of Directors, and in the documents addressed to the shareholders with respect to the financial position and the financial statements;
- the fair presentation of the information given in the management report of the Board of Directors in respect of remunerations and benefits granted to the relevant directors and any commitments given to them in connection with, or after, their appointment, termination or change in function.

In accordance with French law, we ascertained that the information relating to the acquisition of shares and controlling interests and the identity of shareholders were given in the management report.

Paris La Défense and Neuilly-sur-Seine, February 11, 2009

The Statutory Auditors

**KPMG Audit** Department of KPMG SA **Deloitte & Associés** 

Tristan Guerlain Jean-Luc Decornoy Michel Piette Amadou Raimi

# Appendix F

Concordance table -Annual financial report

## **Appendix**

### Concordance table – Annual financial report

The 2008 annual financial report, prepared pursuant to articles L. 451-1-2 of the French Monetary and Financial Code (Code monétaire et financier) and 222-3 of the AMF General Regulations, is composed of  $Document\ de$ référence sections referred to in the following table:

#### Document de Référence sections

EDF financial statements	Appendix E	
EDF group's consolidated financial statements	Section 20.1	
	Chapter 9 (Group's activities)	
	Chapter 4 (Risks factors)	
	Section 21.1.5 (financial authorisations)	
	Chapters 18 to 21 (information relating to share capital	
	structure and composition, exercise of the voting rights,	
Management report	directors appointment)	
	Chapter 16 (powers of the Board of Directors)	
	Chapter 15 (Directors' allowance)	
	Section 21.1.2 (Ownership of shares and control by the	
	Company)	
Certification from the person responsible for the annual financial report	Section 1.2	
Statutory auditors' report on EDF financial statements	Appendix E	
Statutory auditors' report on EDF consolidated financial statements	Section 20.2	

Resolutions subject to the extraordinary Shareholders' Meeting on May 20, 2009

## **Appendix**

### Resolutions subject to the ordinary and extraordinary Shareholders' Meeting on May 20, 2009

#### **AGENDA**

#### **ORDINARY MEETING:**

- Reports from the Board of Directors.
- Reports from the Statutory Auditors.
- Approval of the financial statements for the year ended December 31, 2008.
- Approval of the consolidated financial statements for the year ended December 31, 2008: resolution proposed by EDF's Board of Directors and resolution proposed by the Supervisory Board of FCPE Actions EDF.
- Allocation of net income for the year ended December 31, 2008 as reported in the financial statements and distribution of dividends.
- Agreements governed by article L. 225-38 of the French commercial code.
- Additional Directors' fees allocated to the Board of Directors for the fiscal year 2008: resolution proposed by EDF's Board of Directors and resolution proposed by the Supervisory Board of FCPE Actions EDF.
- Directors' fees allocated to the Board of Directors.
- Authorization for the Board of Directors to carry out transactions on the Company's shares.

#### **EXTRAORDINARY MEETING:**

- Delegation of authority to the Board of Directors to increase the capital, maintaining the shareholders' preferential subscription right.
- Delegation of authority to the Board of Directors to increase the capital, with no preferential subscription rights for shareholders.
- Authorization for the Board of Directors to increase the number of shares to be issued in the event of a capital increase, with or without preferential subscription rights for shareholders.
- Delegation of authority to the Board of Directors to increase the capital by capitalization of reserves, profits, premiums or other amounts eligible for capitalization.
- Delegation of authority to the Board of Directors to increase the capital as a result of a public exchange offer instigated by the Company.
- Authorization for the Board of Directors to increase the capital in return for contributions in kind to the Company.
- Delegation of power to the Board of Directors to increase the capital to the benefit of members of the EDF group savings plan.
- Authorization for the Board of Directors to reduce the capital.
- Powers for formalities

#### ORDINARY MEETING

#### First resolution

### (APPROVAL OF THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31,

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the management report from the Board of Directors and the reports of the Statutory Auditors, approves the financial statements for the year ended December 31, 2008 comprising the balance sheet, income statement and appendices, as presented, and the operations reflected in those financial statements and summarized in those reports. It sets the profit for the year at €867,394,558.51.

It is emphasized that the overall sum of expenses and charges concerned by article 223 quater of the French tax code is €871,167.

#### **Second resolution**

#### (APPROVAL OF THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2008)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the management report of the Board of Directors and the report of the Statutory Auditors on the consolidated financial statements, approves the consolidated financial statements for the year ended December 31, 2008 comprising the consolidated balance sheet, consolidated income statement and appendices, as presented, and the operations reflected in those financial statements and summarized in those reports.

#### Third resolution

#### (ALLOCATION OF THE NET INCOME FOR THE YEAR ENDED DECEMBER 31, 2008 AS REPORTED IN THE FINANCIAL STATEMENTS AND DISTRIBUTION OF DIVIDENDS)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors on the financial statements:

- (i) notes that the distributable profit amounts to €7,780,208,905.84, and decides to set the dividend at €1.28 per share;
- (ii) and decides to allocate the balance of the distributable profit to retained earnings.

Consequently, the total dividend amounts to a maximum of €2,332,378,995.20. Any shares held by the Company at the date of distribution of the dividend will not confer rights to the dividend and the amount corresponding to the unpaid dividend will be allocated to retained earnings.

By decision of the Board of Directors at its meeting on November 30, 2008, an interim dividend of €0.64 per share was paid on December 17, 2008 corresponding to a total amount of €1,166,189,497.60. The dividend to be paid out thus amounts to €0.64 per share or a total of €1,166,189,497.60, and will be paid within thirty days of the date of the Ordinary and Extraordinary Shareholders' Meeting.

The total dividend is eligible for the special 40% tax allowance under paragraph 3-2° of article 158 of the French tax code, to the benefit of individuals who have their tax domicile in France and are subject to income tax, in application of the legal conditions and limits.

Dividends distributed in the past three years were as follows:

Year	Number of shares	Dividend per share	Total dividends paid (after deduction of treasury shares)	Portion eligible for the tax allowance <sup>(1)</sup>
2005	1,822,171,090	€0.79	€1,439,170,388.51	100%
2006	1,822,171,090	€1.16	€2,113,624,504.40	100%
2007	1,822,171,090	€1.28	€2,330,266,755.20	100%

(1) 40% tax allowance as stated under paragraph 3.2 of article 158 of the French tax code.

#### **Resolution A**

(Resolution proposed by the Supervisory Board of the FCPE Actions EDF relating to the application of the result of the fiscal year ending December 31, 2008 and distribution of dividends. This draft resolution was reviewed by the Board of Directors of EDF during its April 1st, 2009 meeting, and was not approved.)

The Shareholders' Meeting, acting in accordance with the guorum and majority requirements applicable to Ordinary Shareholders' Meetings, after having acknowledged the Board of Directors' report, as well as the Statutory Auditors' report on the financial statements:

(i) notes that the profits available for distribution amount to 7,780,208,905.84 euros and decides to allow the payment of a dividend of 0.64 euro per share; and

(ii) decides to apply the remaining available profits to the item "balance brought forward" (report à nouveau).

The dividend will therefore amount to a maximum of 1,166,189,497.60 euros, excluding the shares that would be owned by the Company at the time of its payment, the amount corresponding to the dividend relating to these treasury shares would be applied to the item "balance brought forward".

Following a Board of Directors' decision dated November 30, 2008, an interim dividend of 0.64 euro per share has been paid on December 17, 2008 for a total amount of 1,166,189,497.60 euros. The balance to be distributed per share is nil.

Financial year	Number of shares	Dividend per share	Total dividend paid	
2005	1,822,171,090	€0.79	€1,439,170,388.51	
2006	1,822,171,090	€1.16	€2,113,624,504.40	
2007	1,822,171,090	€1.28	€2,330,266,755.20	

It is stated that, pursuant to article 158, 3, 2° of the French tax code, the whole dividend proposed is eligible to the 40% reduction to which individuals domiciled in France and subject to the income tax are entitled, subject to the limits and conditions provided by law.

#### **Fourth resolution**

#### (AGREEMENTS GOVERNED BY ARTICLE L. 225-38 OF THE FRENCH COMMERCIAL CODE)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the special report of the Statutory Auditors on agreements governed by article L. 225-38 of the French commercial code, takes note of the conclusions of the report and approves the agreements it concerns.

#### Fifth resolution

#### (ADDITIONAL DIRECTORS' FEES AWARDED TO THE BOARD OF DIRECTORS FOR 2008)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors, decides to set the amount of additional directors' fees awarded to the members of the Board for the year ended December 31, 2008 at €32,000.

#### **Resolution B**

(Resolution proposed by the Supervisory Board of the FCPE Actions EDF relating to the directors' fees awarded to the Board of Directors. This draft resolution was reviewed by the Board of Directors of EDF during its April 1st, 2009 meeting, and was not approved.)

The Shareholders' Meeting, acting in accordance with the quorum and majority requirements applicable to Ordinary Shareholders' Meetings, after having acknowledged the Board of Directors' report, determines that no additional directors' fees are awarded to the members of the Board of Directors for the fiscal year ended December 31, 2008.

#### Sixth resolution

#### (DIRECTORS' FEES AWARDED TO THE BOARD OF DIRECTORS)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors, decides to set the amount of directors' fees awarded to the members of the Board for the current year and future years at €180,000, until a further decision is made by the Shareholders' Meeting.

#### **Seventh resolution**

#### (AUTHORIZATION FOR THE BOARD OF DIRECTORS TO ENGAGE IN TRANSACTIONS ON THE COMPANY'S SHARES)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors,

- terminates, with immediate effect, the unused portion of the authorization to purchase shares in the Company given by the Shareholders' Meeting of May 20, 2008 in the sixth resolution, and
- authorizes the Board of Directors to purchase shares in the Company
- remitting shares when rights are exercised attached to marketable securities representing debt instruments giving access by any means, immediately or at a later date, to shares in the Company, and carrying out all hedging operations for the obligations of EDF (or one of its subsidiaries) in respect of those marketable securities;
  - holding shares for future remittal in exchange or payment for any external growth operations;
  - ensuring the liquidity of EDF's share by an investment service provider through a liquidity contract coherent with the code of ethics recognized by the French market authority;
  - attributing shares to members of EDF group employees, notably under any share purchase or free share allocation plan benefiting members of personnel in the conditions set forth by the law, particularly articles L. 225-197-1 and following of the French commercial code or articles L. 3332 18 and following of the French labor code (including any transfer of shares covered by these articles of the french labor code), and carrying out all hedging operations for these operations;
  - reducing the Company's capital by canceling all or some of the shares purchased.

Purchases of shares in the Company may concern a number of shares such that:

- the number of shares the Company purchases during the period of a repurchase program must not exceed 10% of shares making up the share capital at the day of this Shareholders' Meeting; and
- the number of shares the Company holds directly or indirectly at any time must not exceed 10% of the shares making up the Company's share

Acquisitions or transfers of these shares may be carried out by all means, particularly on a market or over the counter, including via acquisition or transfer of blocks, use of derivative financial instruments or notes or securities giving access to the Company's shares, or by setting up options, at such times that the Board of Directors or the person acting on its authority shall decide.

The maximum amount of funds dedicated to execution of this share repurchase program shall be €2 billion.

The purchase price shall not exceed €90 per share; however, the Board of Directors may adjust the maximum purchase price in the event of capitalization of premiums, reserves or profits resulting in either a rise in the nominal value of shares or in creation and attribution of free shares, and in the event of a share split or reverse share split, or any other operation affecting equity, to reflect the effect of these operations on the share value.

This authorization is granted for a maximum duration of 18 months from the date of this meeting.

The Board of Directors shall have all powers to implement this authorization, and may delegate its authority, in order to place all orders in the stock exchange or off-market, allocate or reallocate the shares acquired to the various objectives pursued, under the applicable legal and regulatory conditions, complete all formalities, and in general do everything that is necessary.

The Board of Directors must inform the Shareholders' Meeting each year of the transactions undertaken in application of this resolution.

#### **EXTRAORDINARY MEETING**

#### **Eighth resolution**

#### (Delegation of authority to the Board of Directors to increase the CAPITAL, MAINTAINING THE SHAREHOLDERS' PREFERENTIAL SUBSCRIPTION RIGHT)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors, in accordance with articles L. 225-129 to L. 225-129-6 and L. 228-91 to L. 228 97 of the French commercial code:

- terminates, with immediate effect, the unused portion of the delegation of authority given by the Shareholders' Meeting of May 24, 2007 in its 8th resolution:
- authorizes the Board of Directors to decide to issue, while maintaining the shareholders' preferential subscription right, (i) shares in the Company, (ii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in the Company, (iii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in a company of which the Company directly or indirectly holds more than half of the capital (the "Subsidiary"), for subscription in cash or by offsetting against existing debt.
- also authorizes the Board of Directors to decide to issue marketable securities carrying a right to attribution of Company debt instruments.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45 million (the"Ceiling").

It is emphasized that (i) this Ceiling is common to all capital increases undertaken immediately or at a later date under the 8th, 9th, 10th, 12th and 13th resolutions proposed at this Shareholders' meeting, and the nominal value of such increases shall therefore be deducted from the Ceiling; (ii) the Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

The marketable securities giving access to the capital of the Company or a Subsidiary issued in this way may consist of debt instruments or be associated with issuance of such instruments, or allow their issuance as intermediary securities.

Debt instruments issued under this delegation of authority may take the form of subordinated securities, perpetual or otherwise, issued in Euros or

Securities issued may carry warrants for attribution, acquisition or subscription of bonds or other marketable securities representative of debt instruments

The nominal value of debt instruments issued shall not exceed €4,500,000,000 or the equivalent value in a foreign currency at the date the issue is decided. It is emphasized that this maximum is common to all debt instruments issued under the 8th, 9th, 10th, 12th and 13th resolutions proposed at this Shareholders' meeting.

Company share subscription warrants may be issued through a subscription offer, but also through free attribution to holders of existing shares and, but also by free award to the holders of existing shares. In the case of free award of autonomous subscription warrants, the Board of Directors may decide that fractional subscription rights will be non-transferable and that the corresponding shares will be sold.

The Board of Directors may take any and all measures to protect the rights of holders of marketable securities giving access to the capital existing at the day of the capital increase.

Shareholders may, in compliance with the law, exercise their preferential subscription right for new shares as of right. The Board of Directors shall also be entitled to award shareholders a subscription right for excess shares, concerning a higher number of shares or marketable securities giving access to the capital than the number they could subscribe as of right, proportionally to the subscription rights held and in any event up to the limit of their share application.

If the subscriptions as of right, together where relevant with subscriptions for excess shares, do not absorb the entire issue of securities, the Board of Directors may take one or more of the following steps, in the order of its choice:

- limit the issue to the quantity of subscriptions received, provided this quantity is at least three quarters of the planned issue;
- freely allocate all or some of the shares unsubscribed as of right, and where relevant excess unsubscribed shares;
- offer all or some of the unsubscribed shares to the public.

The Shareholders' Meeting notes that, to the benefit of holders of the marketable securities giving access to the Company's capital issued under this resolution, this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to the shares associated with those newly-issued marketable securities.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

#### Ninth resolution

(DELEGATION OF AUTHORITY TO THE BOARD OF DIRECTORS TO INCREASE THE CAPI-TAL, WITH NO PREFERENTIAL SUBSCRIPTION RIGHTS FOR SHAREHOLDERS)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors, in accordance with articles L. 225-129 to L. 225-129-6, L. 225-135 and L. 225 136, and L. 228-91 to L. 228 97 of the French commercial code:

- terminates, with immediate effect, the unused portion of the delegation of authority given by the Extraordinary Shareholders' Meeting of May 24, 2007 in its 9th resolution:
- authorizes the Board of Directors to decide to issue, with no preferential subscription rights for shareholders in application of article L. 225-136 of the French commercial code, (i) shares of the Company, (ii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in the Company, (iii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in a company of which the Company directly or indirectly holds more than half of the capital (the "Subsidiary"), for subscription in cash or by offsetting against existing debt;
- also authorizes the Board of Directors to decide to issue marketable securities carrying a right to attribution of Company debt instruments.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45 million (the "Ceiling"). It is emphasized that (i) this Ceiling is common to all capital increases undertaken immediately or at a later date under the 8th, 9th, 10th, 12th and 13th resolutions proposed at this Shareholders' meeting, and the nominal value of such increases shall therefore be deducted from the Ceiling; (ii) the Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

The nominal value of capital increases, immediately or at a later date, resulting from issues undertaken under the offer(s) made solely to qualified investors (investisseurs qualifiés) as defined by the French monetary and financial code, shall not exceed the ceiling set by the law and regulations.

The marketable securities giving access to the capital of the Company or a Subsidiary issued in this way may consist of debt instruments or be associated with issuance of such instruments, or allow their issuance as intermediary securities.

Debt instruments issued under this delegation of authority may take the form of subordinated securities, perpetual or otherwise, issued in Euros or other currencies.

Decides that the total nominal value of all debt instruments issued under this resolution shall not exceed, and shall be deducted from, the Ceiling for debt securities defined in the 8th resolution proposed at this Shareholders' meeting.

The Shareholders' Meeting decides to eliminate the shareholders' preferential subscription right for these shares and marketable securities, which will be issued through a share offer under the conditions set forth in article L. 225-136 of the French commercial code, through a public offer and/or an offer for qualified investors as defined by the French monetary and financial code.

Nevertheless, the Board of Directors shall be entitled to grant shareholders a priority subscription period concerning some or all of the issue; which would not lead to the creation of negotiable right and may be completed by subscription for shares in excess of subscriptions as of right. Shares unsubscribed under this right may be offered through a public or private placement for qualified investors as defined by the French monetary and financial code, in France and/or abroad.

If the subscriptions, including, if necessary, any subscription by shareholders, do not absorb the entire issue of securities, the Board of Directors may limit the issue to the quantity of subscriptions received, provided this quantity is at least three quarters of the planned issue.

The Shareholders' Meeting notes that, to the benefit of for holders of the marketable securities giving access to the Company's capital issued under this resolution, this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to the shares concerned by those newly-issued marketable securities.

The Shareholders' Meeting decides that:

- the issue price of shares issued directly shall be at least equal to the weighted average of the opening price of the Company's shares for the three trading sessions of the Euronext Paris market preceding the date at which the subscription price for the capital increase is set, less a discount of a maximum of 5% if required, after correction of the average if necessary due to differences in the shares' issue dates;
- the issue price of marketable securities giving access to the capital shall be such that the sum immediately received by the Company, plus any further sum likely to be received if applicable, is no less than the minimum subscription price defined in the above paragraph for each share issued as a result of issuance of these marketable securities.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

#### **Tenth resolution**

#### (AUTHORIZATION FOR THE BOARD OF DIRECTORS TO INCREASE THE NUMBER OF SHARES TO BE ISSUED IN THE EVENT OF A CAPITAL INCREASE, WITH OR WITHOUT PREFERENTIAL SUBSCRIPTION RIGHTS FOR SHAREHOLDERS)

The Shareholders' Meeting, deliberating in compliance with the guorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors, in accordance with article L. 225-135-1 of the French commercial code, authorizes the Board of Directors to decide to increase the number of shares to be issued for each of the issues undertaken in application of the 8th and 9th resolutions proposed to the Shareholders' Meeting, within the periods and limits prescribed by the law and regulations applicable on the date of the issue (currently, within thirty days after subscription is closed, up to a limit of 15% of the initial issue and at the same price as the initial issue), subject to respect of the Ceiling defined in the resolution under which the issue is undertaken.

The authorization given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

#### **Eleventh resolution**

#### (DELEGATION OF AUTHORITY TO THE BOARD OF DIRECTORS TO INCREASE THE CAPITAL BY CAPITALIZATION OF RESERVES, PROFITS, PREMIUMS OR OTHER AMOUNTS ELIGIBLE FOR CAPITALIZATION)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors, in accordance with articles L. 225-129 to L. 225-129-6 and L. 225-130 of the French commercial code:

Terminates, with immediate effect, the unused portion of the delegation of authority given by the Extraordinary Shareholders' Meeting of May 24, 2007 in its 11th resolution, and:

Delegates its authority to the Board of Directors to increase the capital by capitalization of reserves, profits, premiums or other amounts eligible for capitalization, or to do so in conjunction with a capital increase in cash undertaken under the previous resolutions, or in the form of attribution of free shares or an increase in the nominal value of existing shares, or in a combination of the two.

Decides that the total nominal value of the capital increase, immediately or at a later date, undertaken under this resolution shall not exceed €1 billion. It is emphasized that (i) this ceiling is separate from and independent of the ceilings for capital increases resulting from issues of shares or marketable securities authorized by the 8th, 9th, 10th, 12th and 13th resolutions proposed at this Shareholders' meeting, and (ii) this ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

The Board of Directors may decide that fractional subscription rights will be non-transferable and that the corresponding shares will be sold; the proceeds of such sale will be allocated to holders of the rights within the period defined by the regulations.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

#### Twelfth resolution

#### (DELEGATION OF AUTHORITY TO THE BOARD OF DIRECTORS TO INCREASE THE CAPITAL AS A RESULT OF AN EXCHANGE OFFER INSTIGATED BY THE COMPANY)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors, in accordance with articles L. 225-129-2, L. 225-148 and L. 228-91 and following of the French commercial code,

Terminates, with immediate effect, the unused portion of the delegation of authority given by the Extraordinary Shareholders' Meeting of May 24, 2007 in its 12th resolution, and:

Delegates its authority to the Board of Directors, for a duration of 26 months from the date of this meeting and on the basis and terms defined in the 9th resolution, to decide to issue shares in the Company or marketable securities giving access to shares in the Company already issued or to be issued, in exchange for securities tendered to a public exchange offer instigated by the Company in or outside France, in accordance with local rules, in respect of shares in a company whose shares are admitted to trading on a regulated market as concerned by article L. 225 148 mentioned above, and decides, to the benefit of bearers of the newlyissued securities, to eliminate, if necessary, the shareholders' preferential subscription right for those shares and marketable securities.

Notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to shares associated with any marketable securities to be issued under this delegation of authority.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45 million, and the total nominal value of the capital increases undertaken under this resolution shall be deducted from the Ceiling for the overall nominal value of capital increases set forth in the 9th resolution proposed at this Shareholders' meeting.

This Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

Decides that the total nominal value of the debt instruments issued under this resolution shall not exceed, and shall be deducted from, the ceiling for debt instruments defined in the 8th resolution proposed at this Shareholders' meeting.

Decides that the Board of Directors shall have all powers to implement this authorization, and in particular to:

- carry out the public offers concerned by this resolution;
- set the exchange ratio and the amount of cash payment if applicable;
- set the dates and issue conditions, particularly the price and issue date, of shares or where relevant marketable securities giving access to shares in the Company and, where necessary, amend the characteristics of the securities issued under this resolution during the lifetime of the securities concerned in compliance with the applicable formalities;
- register in the "Contribution premium" in the balance sheet liabilities, relative to the rights of all shareholders, the difference between the issue price and nominal price of the new shares, and if necessary deduct from this contribution premium account all expenses incurred in connection for the purpose of the authorized operation;
- in general take all appropriate action and enter into any and all agreements.

#### Thirteenth resolution

#### (AUTHORIZATION FOR THE BOARD OF DIRECTORS TO INCREASE THE CAPITAL IN RETURN FOR CONTRIBUTIONS IN KIND TO THE COMPANY)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors, in accordance with article L. 225-147 and articles L. 228-91 and following of the French commercial code,

Terminates, with immediate effect, the unused portion of the authorization given by the Extraordinary Shareholders' Meeting of May 24, 2007 in its 13th resolution, and

Authorizes the Board of Directors to increase the capital by a maximum of 10% of the existing capital (at the date of this meeting), in view of the report of the appraiser (commissaire aux apports), in remuneration of contributions in kind made to the Company, in the form of shares or marketable securities giving access to the capital when the provisions of article L. 225-148 of the French commercial code do not apply.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45 million and the total nominal value of the capital increases undertaken under this resolution shall be deducted from the Ceiling for the overall nominal value of capital increases set forth in the 9th resolution proposed at this Shareholders' meeting.

This Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

Decides that the total nominal value of all debt instruments issued under this resolution shall not exceed, and shall be deducted from, the Ceiling for debt securities defined in the 8th resolution proposed at this Shareholders' meeting.

Decides, to the benefit of holders of the shares or marketable securities issued in exchange for the contribution in kind, to eliminate the shareholders' preferential subscription right to the shares and marketable securities issued in this way.

The Meeting records the fact that this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to the shares associated with any marketable securities to be issued under this delegation of authority.

Decides that the Board of Directors shall have all powers to implement this authorization, and in particular to determine the terms and conditions of the authorized operations, including valuing the contribution and where relevant granting special benefits and formally acknowledging execution of the capital increase and amending the bylaws accordingly.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

#### Fourteenth resolution

#### (Delegation of power to the Board of Directors to increase the capital TO THE BENEFIT OF MEMBERS OF THE EDF GROUP SAVINGS PLAN)

The Shareholders' Meeting, deliberating in compliance with the guorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors, in accordance with article L. 225-129-6, L. 225-138 I and II and L. 225-138-1 of the French commercial code and articles L. 3332-18 and following of the French labor code,

Terminates, with immediate effect, the unused portion of the authorization given by the Extraordinary Shareholders' Meeting of May 24, 2007 in its 14th resolution, and:

Grants the Board of Directors full powers in order to increase the capital of the Company, by an issue of shares or marketable securities giving access to the shares in the Company already issued or yet to be issued, reserved for employees and former employees who are members of the EDF group company savings plan.

Fixes the ceiling of the nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €10 million. This limit does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

Fixes the discount at 20% relative to the average opening price of the Company's share over the twenty trading sessions of the Euronext Paris market preceding the date of the decision fixing the opening date for subscriptions. However, the shareholders' meeting expressly authorizes the Board of Directors to reduce or eliminate this reduction if it deems such action appropriate, in view of factors such as locally applicable legal, accounting, tax or social systems.

Decides that the Board of Directors may, within the limits prescribed by the law and regulations applicable, attribute for no consideration shares already issued or to be issued, or other securities giving access to the Company's capital already issued or to be issued, in conformance with the company's additional contribution for employees, or if need be with the reduction.

Decides, to the benefit of current and former employees, to eliminate the shareholders' preferential subscription right concerning the shares and marketable securities to be issued under this resolution, and to waive all rights to shares or other securities attributed for no consideration in application of this delegation of authority.

Decides that the Board of Directors shall have all powers to implement this authorization, and in particular to;

- determine the scope, the terms and conditions of operations and set the dates and conditions of the issues to be made under this authorization,
- set the opening and closing dates for subscriptions, the issue dates, the methods for payment of the shares and other marketable securities giving access to the Company's capital,

• grant extensions for settlement of the shares and, where relevant, other marketable securities giving access to the Company's capital, apply for admission to trading for the newly issued securities in any place it wishes.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

#### Fifteenth resolution

#### (AUTHORIZATION FOR THE BOARD OF DIRECTORS TO REDUCE THE CAPITAL)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the Statutory Auditors, in accordance with article L. 225 209 of the French commercial code,

Terminates, with immediate effect, the unused portion of the authorization given by the Extraordinary Shareholders' Meeting of May 24, 2007 in its 16th resolution, and:

Authorizes the Board of Directors to reduce the capital by cancellation of all or some of the shares purchased under the Company's share repurchase program, by up to 10% of the existing capital in 24-month periods. This 10% limit applies to the amount of the Company's capital, adjusted if necessary to take into account operations affecting the share capital after the date of this meeting.

Authorizes the Board of Directors to allocate the difference between the repurchase value and nominal value of cancelled shares to the available premiums and reserves.

Grants all powers to this end to the Board of Directors, with the possibility of subdelegation as permitted by the law and regulations applicable, to set the terms and conditions and amend the Company's bylaws accordingly, and more generally to take all necessary action.

The authorization given to the Board of Directors under this resolution is valid for a duration of 18 months from the date of this meeting.

#### Sixteenth resolution

#### (Powers for formalities)

The Shareholders' meeting grants all powers to the bearer of an original, a copy or an extract of the minutes of this meeting to carry out all legal and administrative formalities, and file and register all information required by the laws in force.



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