

Corporate and Commercial Communication Division.

The EDF Group is ISO 14001 certified.

APRIL 2008



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## EDF GROUP – 2007 ANNUAL REPORT



 EUROPEAN LEADER FOR TOMORROW'S ENERGIES



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EDF customer  
accounts in Europe  
**38.5 millions**

Sales  
**€59.6 billion**

**+**  
**1.2%**

**158,640**  
employees

EDF Generation  
worldwide  
**610.6 TWh**

## PROFILE

The EDF Group is a leading player in the European energy industry, active in all areas of the electricity value chain, from generation to trading and network management. The leader in the French electricity market, the Group also has solid positions in the United Kingdom, Germany and Italy, with a portfolio of 38.5 million European customers and a generation fleet which is unique in the world. It intends to play a major role in the global revival of nuclear and is increasingly active in the gas chain. The Group has a sound business model, evenly balanced between regulated and deregulated activities. Given its R&D capability, its track record and expertise in nuclear, fossil-fired and hydro generation and in renewable energies, together with its energy eco-efficiency offers, EDF is well placed to deliver competitive solutions to reconcile sustainable economic growth and climate preservation.

Consolidated figures at 31/12/2007.



First concrete pouring at EPR site in Flamanville.





# A GLOBAL NUCLEAR RENAISSANCE

- competitive energy with zero CO<sub>2</sub> emissions • supply security
- expertise • joint investments
- EPR technology • United States
- China • United Kingdom
- South Africa

**58**

nuclear reactors  
commissioned  
in France

**10**

EPR projects  
in our four  
target countries

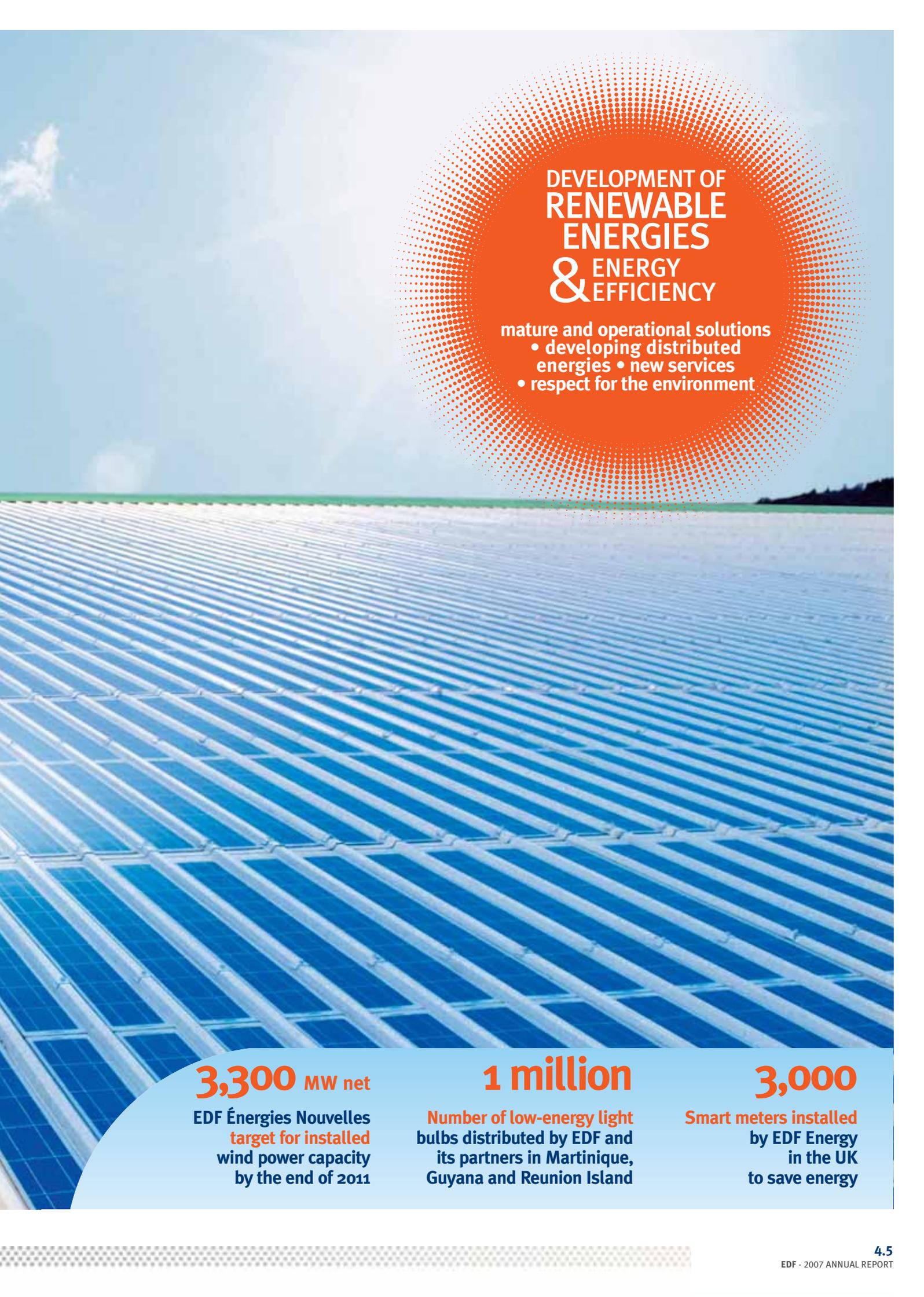
**1,650 MW**

EPR, the most powerful  
reactor in the world, under  
construction at Flamanville



Photovoltaic system at the Geoffroy Guichard Stadium, Saint-Etienne.





DEVELOPMENT OF  
RENEWABLE  
ENERGIES  
& ENERGY  
EFFICIENCY

- mature and operational solutions
- developing distributed energies
  - new services
  - respect for the environment

**3,300** MW net

EDF Énergies Nouvelles  
target for installed  
wind power capacity  
by the end of 2011

**1 million**

Number of low-energy light  
bulbs distributed by EDF and  
its partners in Martinique,  
Guyana and Reunion Island

**3,000**

Smart meters installed  
by EDF Energy  
in the UK  
to save energy





## BUILDING THE EUROPEAN BUSINESS

open electricity and gas market

- 700 GW to be built by 2030
- networks to be secured



**6,000 MW**

of new capacity  
by 2012 in France

€ **6.2** billion

investment planned by Italian  
company Edison in natural gas  
and electricity by 2013

**870 MW**

construction of a natural gas-fired  
plant in the Netherlands  
to come on line in 2009



**Delivering results,**  
major strategic progress internationally  
and increasing investments.



# Chairman's statement

Pierre GADONNEIX



The past year was one of contrasting trends. The oil price climbed to 100 dollars, and raw material costs edged higher.

Energy demand continued to grow, making investment in new generation capacity unavoidable.

At the same time, the urgency of climate change became clear to all, and the subprime crisis caused real turmoil in financial markets.

Against this backdrop, EDF once again **delivered results** and made **major strategic progress internationally**. The Group is now positioned to play an active role in the nuclear revival on the world's leading energy markets.

As in the previous year, EDF recorded **improvements for all the main financial indicators in 2007, and all Group subsidiaries and affiliates made positive contributions to the strong results**. Sales reached €59.6 billion, marking a slight improvement on the previous year despite the sale of Light in Brazil. EBITDA came in at €15.2 billion, implying organic growth of 6.1%, and net income from ordinary operations, excluding non-recurring items, advanced by 10.6%.

**We delivered on all our commitments in 2007.** The targets set out in the *Altitude* performance program were largely exceeded. We have also made all of the disposals announced, following the sale of our Mexican plants late in December.

**The residential market was opened to competition in July.** This was an opportunity for EDF to demonstrate its capacity for innovation, offering customers services that combine more environmental protection, more savings and more well-being through energy savings, renovation advice and decentralized renewable energy generation solutions. Our teams worked hard to implement a new organization of the distribution and sales and marketing activities. ERDF, the new subsidiary in charge of distribution, has been operational since the 1<sup>st</sup> of January 2008. EDF approached this last step in the deregulation process with two key goals in mind: guarantee non-discriminatory network access to all suppliers via the transmission and distribution subsidiaries, and make sure that all our customers enjoy the same service as before, in keeping with our quality public service commitments.





➔ **The Group also continued to step up its investment program.** Operating investment has increased by almost 50% over two years, reaching €7.5 billion in 2007. In France, investment amounted to €4.5 billion, making EDF the country's largest investor. Funds were allocated to all businesses and geographic areas. In the generation activity, where investments have been ramping up since 2006, we brought new capacity on stream, of which 1,400 MW in France<sup>1</sup>. Construction work on the EPR reactor in Flamanville proceeded on schedule. Significant efforts are being implemented to maintain and extend the lifespan of the hydro and nuclear assets. Investments were also made in the transmission and distribution networks, in France and in the UK and Germany. On the renewable energy front, EDF Énergies Nouvelles continued to record strong growth, with net capacity in service rising above 1,000 MW during the year.

**Our status as the world's premier nuclear operator allowed us to reach a major milestone in 2007: working with partners in the United States and China, we will be the first to become joint owners and operators of nuclear power stations in these countries.**

1. Porcheville in 2006, Cordemais in 2007 (1,270 MW) and a combustion turbine in Vitry in 2007 (130 MW).

Major energy and environmental challenges lie ahead. They will represent an opportunity for the sector as a whole, and for EDF in particular.

We must tackle climate change while assuring **security of supply**, which is being threatened by the scarcity and high cost of hydrocarbons at a time when global demand is steadily increasing.

The goal is to bolster our generation capacities to continue to contribute significantly to the energy independence of France and Europe.

In addition to being the world's largest nuclear operator, we are also a leader in the field of renewable power, thanks to our hydro fleet and EDF Énergies Nouvelles. **As a major energy player with unmatched industrial resources, EDF is ready to demonstrate, today and in the future, its leadership when it comes to the safe generation of zero-carbon energy at competitive costs.**



With its unequalled industrial asset base, EDF is ideally positioned to demonstrate its leadership, now and in the future, when it comes to generating safe, competitive and carbon-free energy. ”

**In France, 95% of our electricity generation is carbon-free, and EDF emits three times less CO<sub>2</sub> per KWh than the other large European electricity groups.**

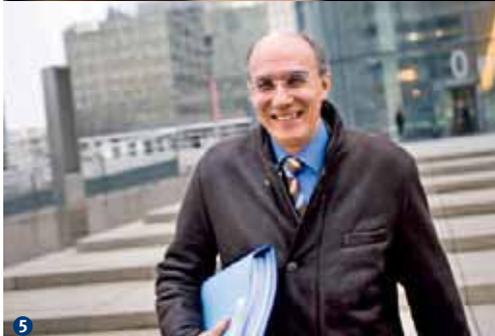
EDF will continue to focus on productivity in the short and medium terms to further improve its operating performance. We are also preparing for the longer term by investing to maintain and expand our generation assets and achieve **sustainable industrial growth**.

**Between 2008 and 2010, we will invest more than €35 billion, in France and internationally, in key businesses.** A total 6,000 MW of new generation capacity will be brought on stream between 2006 and 2012 in France. We will also continue to build up our natural gas and renewable energy businesses, including tidal and photovoltaic power and electric vehicles. R&D will keep the focus on developing low-carbon technologies such as carbon capture and storage. As a leading player in the world nuclear revival, EDF aims to invest in, commission and operate more than ten EPRs by 2020 in four key markets: the United

Kingdom, the United States, China and South Africa.

This will require **hiring skilled people**, which we are doing. By way of example, EDF recently announced the creation of the European Foundation for Tomorrow's Energies, which will fund education and research in the area of zero-greenhouse gas technologies. Our goal is to recruit more than 10,000 people in the next five years, including 500 nuclear engineers a year, to drive the sustainable industrial growth that will secure EDF's position as the leading energy group of tomorrow.

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# Running a European Group

## Composition of the Executive Committee as at March 31, 2008

- 1 - **Pierre Gadonneix**  
Chairman and CEO
- 2 - **Daniel Camus**  
Chief Financial Officer
- 3 - **Yann Laroche**  
Chief Human Resources and Communications Officer
- 4 - **Jean-Louis Mathias**  
Chief Operating Officer, Integration and Deregulated Operations in France
- 5 - **Jean-Pierre Benqué**  
Senior Executive Vice President, Customers
- 6 - **Bernard Dupraz**  
Senior Executive Vice President, Generation and Engineering
- 7 - **Dominique Lagarde**  
Senior Executive Vice President, Strategy and Coordination
- 8 - **Marianne Laigneau**  
General Secretary and Chief Legal Officer
- 9 - **Bruno Lescoeur**  
Senior Executive Vice President, International Industrial and Public Affairs
- 10 - **Umberto Quadrino**  
Edison, CEO
- 11 - **Vincent de Rivaz**  
EDF Energy, President of the Executive Board
- 12 - **Hans-Peter Villis**  
EnBW, President of the Executive Board
- 13 - **Gérard Wolf**  
Senior Executive Vice President, Subsidiaries and International Development

## Executive Committee

### An Executive Committee which reflects the Group

The Chairman of the Board of Directors who is also Chairman and Chief Executive Officer, presides over the Group. First appointed Chairman of the Board of EDF by decree on November 24, 2004, Pierre Gadonneix's term of office was renewed following the Shareholders' Meeting of February 14, 2006. He is supported by a small steering committee, the Top 4, and by the Group's Executive Committee.

As of 2006, the Top 4, a decision-making body, comprises the Chairman and CEO and the three Chief Officers.

The Executive Committee, a cross-disciplinary strategic and consultative body, comprises the members of the Top 4, the Senior Executive Vice Presidents and the Corporate Secretary of EDF SA, the CEO's of EDF Energy, EnBW and Edison. Its composition reflects the need to give equal treatment to all the Group's strategic priorities. A limited number of specific decision-making committees support the Executive Committee's activity. There are, in addition, a number of ad hoc committees or boards which are responsible for groupwide strategic issues.

### Monitoring, safety and coherence bodies

A number of critical functions report directly to the Executive Committee such as Corporate Audit, Corporate Risk Management<sup>1</sup> and the Senior Vice President, Nuclear Safety and Radioprotection, who submits an annual report to the CEO.

### The Board of Directors

The EDF Board of Directors determines the orientations of the Group's activities and oversees their implementation.

It defines the major strategic, economic, financial or technological objectives.

It addresses, in its deliberations, all other matters affecting the Group and relevant to its proper functioning.

In 2007, it reviewed matters relating to the Group's normal activities and the year's major projects: the distribution subsidiary, the ordering of the Flamanville 3 nuclear reactor steam supply system, the international nuclear strategy (including the signing of a partnership with Constellation in the United States), and the strengthening and renewal of EDF's fossil-fired fleet in France.

Pursuant to the French law of July 26, 1983 on the democratization of public service, the French State holding less than 90% of EDF's share capital, the Group's Board of Directors comprises 18 members, of which one third represent the French State, one third represent the employees and one third are appointed by the Shareholders' Meeting on proposal by the Board of Directors.

## The Audit Committee

1. See *Document de référence*.

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- 4-5-6-12 : MÉDIATHÈQUE EDF – STÉPHANE LAVOUÉ
- 7-8-9-10-13 : MÉDIATHÈQUE EDF – LIONEL CHARRIER
- 11 : DR

In connection with the expiry of the Chief Officers' mandate on May 20, 2008, EDF's Boards of Directors appointed, as proposed by the Chief Executive Officer, Daniel Camus, Dominique Lagarde and Jean-Louis Mathias as Chief Officers, effective following the Shareholders' Meeting to be held on May 20, 2008. Dominique Lagarde becomes Chief HR and Communications Officer.

On April 8, 2008, EDF announced its new Executive Committee, effective May 20, 2008,

with the appointment of Philippe Huet, Senior Executive Vice President, Strategy and Coordination and Anne Le Lorier, Senior Executive Vice President, Corporate Finance, Finance and Treasury. Jean-Pierre Benqué, Senior Executive Vice President, assumes responsibility for North American operations and remains, temporarily, in charge of the Customer Branch. Bruno Lescoeur, Senior Executive Vice President, assumes responsibility for gas activities.

# GOVERNANCE

MÉDIATHÈQUE EDF – SOPHIE BRANDSTROM



MÉDIATHÈQUE EDF – SOPHIE BRANDSTROM



MÉDIATHÈQUE EDF – GILLES LARVOR



In order to carry out its duties, the Board of Directors has a number of committees comprised of Board directors.



comprised of five members, comments on the company's financial situation, the medium-term plan and the budget, the draft financial statements prepared by the Finance Division (EDF parent company and consolidated financial statements), the monitoring of risks, internal audit and control, as well as the choice of Statutory Auditors. In 2007, the Committee also reviewed matters such as the distribution subsidiary, the insurance strategy and the centralization of the EDF Group's long-term financing.

## **The Committee for Monitoring Nuclear Commitments**

It is responsible for monitoring the development of nuclear provisions, commenting on the governance of dedicated assets, on the rules for matching assets and liabilities and on strategic allocation, as well as verifying the compliance of the management of the dedicated assets constituted by EDF.

## **The Strategy Committee,**

comprised of seven members, comments on the company's major strategic orientations. In 2007, it notably reviewed EDF's investment strategy with respect to generation assets in France, the strategy for international nuclear development and the updating of the Group's strategic reference framework.

## **The Ethics Committee,**

comprised of six members, monitors that ethical considerations are taken into account in the Board of Directors' work and in the management of EDF. It reviews the annual report excluding the financial statements, the activity reports from the Ethics and Compliance Advisor as well as the reports from the Mediator and the Senior Vice President, Nuclear Safety and Radioprotection. In 2007, it examined the communications strategy and the new EDF ethical reference framework. It continued its review of the policy on partnership with nuclear service providers and oversaw

the implementation of a code of conduct for the distributor. Finally, it produced the annual report on the functioning of the Board of Directors, for which it is responsible.

## **The Appointments and Remuneration Committee,**

comprised of three members, comments on the compensation of the CEO and Chief Officers. It also comments to the Board on the amount and allotment of Board directors' fees as well as on the compensation terms of the main executives. Finally, it provides the Board of Directors with a list of proposed Board directors for appointment by the Shareholders' Meeting.





## COMPOSITION OF THE EDF BOARD OF DIRECTORS AS AT MARCH 31, 2008

**Pierre Gadonneix**

Board director appointed by the General Shareholders' Meeting  
Chairman and CEO

### FRENCH STATE REPRESENTATIVES

**Pierre-Marie Abadie**

replacing François Jacq as of August 2007. Director for Energy Demand and Energy Markets at the French Department for Energy and Raw Materials (*Direction Générale de l'Energie et des Matières Premières - DGEMP*) at the French Ministry of Ecology, Energy, Sustainable Development and Land Use.

**André Aurengo**

University professor – hospital practitioner, Head of the Nuclear Medicine Department at the Pitié-Salpêtrière hospital

**Bruno Bézard**

Director General of the French State Holdings Agency at the French Ministry of the Economy, Finance and Employment (*Ministère de l'économie, des finances et de l'emploi*)

**Gérard Errera**

replacing Philippe Faure, as of December 2007. General Secretary at the French Ministry of Foreign and European Affairs (*Ministère des affaires étrangères et européennes*)

**Yannick d'Escatha**

Chairman of the French Space Research Center (*Centre National d'Etudes Spatiales - CNES*)

**Philippe Josse**

Director of the Budget at the French Ministry of the Budget, Public Accounts and the Civil Service.

### ELECTED BY THE GENERAL SHAREHOLDERS' MEETING

**Frank E. Dangeard**  
Chairman and Chief Executive Officer of Thomson until April 9, 2008.

**Daniel Foundoulis**

Member of the Executive Committee of the National Consumers' Council and member of the European Commission Consumer Committee in Brussels

**Claude Moreau**

Chairman of the Interministerial Commission on clean, energy-efficient vehicles (*Véhicules Propres et économes en énergies*) between 2004 and 2007

**Henri Proglio**

Chairman and Chief Executive Officer of Veolia Environnement

**Louis Schweitzer**

Chairman of the Renault Board of Directors, Chairman of HALDE, the French equal opportunities commission

### EMPLOYEE REPRESENTATIVES

**Jacky Chorin**

sponsored by the general confederation of labor-workers' force (CGT-FO Union)

**Marie-Catherine Daguette**

sponsored by the CGT

**Alexandre Grillat**

sponsored by the French confederation of management – general confederation of executives (CFE-CGC)

**Philippe Pesteil**

sponsored by the French democratic confederation of labor (CFDT)

**Jean-Paul Rignac**

replacing Laurence Hoeffling as of November 2007, sponsored by the CGT

**Maxime Villota**

sponsored by the CGT

Board meetings are also attended by Head of the French Government's Economic and Financial Control Commission as well as by the Secretary of the Works Council, none of whom have voting rights.



MÉDIATHÈQUE EDF – SAMUEL BOLLENDORF



MÉDIATHÈQUE EDF – JULIEN DANIEL



**EDF's success is founded on its ability to bring together all the Group's components while fully respecting their individual governance rules."**

**Marianne Laigneau**, General Secretary and Chief Legal Officer

# A EUROPEAN GROUP WITH GLOBAL REACH

## Other European countries



### AUSTRIA

**ESTAG Group** (EDF 20% owned, 25% of voting rights)

- Electricity, Gas and Heat Distribution
- Electricity, Gas and Heat Sales
- Services

406,459 customers

### BELGIUM

**EDF Belgium** (EDF 100%)

EDF Belgium owns 50% of the Tihange 1 nuclear power plant, 50/50 with Electrabel

- Electricity Generation
- Electricity and gas Sales
- Services

Electric installed capacity: 419 MW

### SPAIN

**Hispaelec Energia S.A.** (EDF 100%)

- Electricity Sales

Numbers of customers: approximately 50 sites

**Elcogas** (EDF 31.39%)

- Electricity Generation

Electric installed capacity: 335 MW

### HUNGARY

**BERT** (EDF 95.57% owned and voting rights)

- Electricity and Heat Generation

Electric installed capacity: 356 MW

Thermal installed capacity: 1,471 MWth

**Demasz** (EDF 100%)

- Electricity Distribution
- Electricity Sales

770,887 customers

With: thermal W for cogeneration, as opposed to electric W.

### POLAND

**ECW** (EDF 77.52% owned and voting rights)

- Electricity and heat Generation

Electric installed capacity: 353 MW

Thermal installed capacity: 1,225 MWth

**Elektrownia Rynnik S.A. – ERSA** (EDF 78.63% owned, 97.05% of voting rights)

- Electricity Generation

Electric installed capacity: 1,775 MW

**ECK** (EDF 66.26% owned and voting rights)

- Electricity and heat Generation

Electric installed capacity: 460 MW

Thermal installed capacity: 1,258 MWth

**Kogeneracja** (EDF 35.61% owned, 50% of voting rights)

- Electricity and Heat Generation

Electric installed capacity: 363 MW

Thermal installed capacity: 1,059 MWth

**Zielona Gora** (EDF 35.56% owned, 99.87% of voting rights)

- Electricity and Heat Generation

Electric installed capacity: 221 MW

Thermal installed capacity: 322 MWth

### SLOVAKIA

**SSE** (EDF 49% owned and voting rights)

- Electricity and heat distribution
- Electricity, Gas and heat Sales

699,665 customers

### SWITZERLAND

**Atel Group** (EDF 24.83% owned, 25% of voting rights)

- Electricity Generation
- Electricity, Trading and Sales
- Electricity transmission and distribution
- Services

Electric installed capacity: 3,714 MW

Thermal installed capacity: 918 MWth

**Emosson/Chatelôt/Mauvoisin** (EDF 50% owned and voting rights)

- Hydropower Generation

0.4 TWh made available



## WORLDWIDE

The Group invests and is involved in generation outside Europe as well, bringing its engineering and operating expertise to different projects. EDF also leverages this expertise by offering its services to large national electricity companies.

## UNITED STATES

**UniStar Nuclear Energy, LLC.**

50/50 joint venture between EDF and Constellation Energy (EDF 3.1%). UniStar will build, own and operate European pressurized water reactor (EPR) nuclear plants in the US.

## CHINA

**Figlec** (EDF 100% – Laibin thermal plant)  
Installed capacity: 720 MW

**Shandong Zhonghua Power Company** (EDF 19.6%)  
Installed capacity: 3,000 MW

## LAOS

**Nam Theun Power Company**

(EDF 35%)  
Installed capacity: 1,070 MW  
(Hydro plant under construction)

## VIETNAM

**Mekong Energy Company Ltd**

(EDF 56.25%)  
Installed capacity: 715 MW



## UNITED KINGDOM

### EDF Energy (EDF 100%)

Sales contribution:

**€8.4 billion**

- Electricity Generation
- Electricity Distribution
- Electricity and Gas Sales
- Services

Numbers of customers – accounts : approximately **5.5 million** (including gas)

Electric installed capacity: **4.9 GW**  
Gas activity: **39.6 TWh**

### EDF Trading (EDF 100%)

Sales contribution: **€670 million**

- Energy trading for the Group's own account in Europe.

Volumes traded:

Electricity: **1,207 TWh**

Natural gas: **186 Gm<sup>3</sup>**

Coal: **454 Mt**

Oil: **205 Mb**

Emission certificates of CO<sub>2</sub>: **325 Mt**

Gross global gas volumes handled by the Group's companies including plants' internal consumption



## FRANCE

### EDF

Sales: **€32.2 billion**

#### DEREGULATED ACTIVITIES (activities open to competition)

- Electricity generation
- Electricity and gas supply and optimization in mainland France.
- Sales of engineering and consulting services

**27.2 million customers** (including gas) excluding Corsica and overseas departments.

Electricity installed capacity: **96.2 GW** in mainland France.

#### REGULATED ACTIVITIES

- Generation and electricity distribution by EDF in Island Energy Systems (IES)

#### RTE-EDF Transport (EDF 100%)

- Transmission in mainland France. RTE owns, operates, maintains and develops the transmission networks high and ultra high voltage.

Around **100,000 km** of high voltage and ultra high voltage grids  
**44 cross-border lines**

#### ERDF (EDF 100%)

- Distribution in mainland France. ERDF (created on January 1, 2008) owns, generates, maintains and develops the electricity distribution networks (high and low voltage)

**596,200 km** of 20,000 volt high voltage lines  
**669,300 km** of 400 volt low voltage lines

#### EDF Énergies Nouvelles (Owned 50%)

- Development, construction and operation of electricity generation assets, mainly from renewable energy sources
- Sales to third parties of electricity generation assets based on renewables it has developed and built
- Operation and maintenance of wind farms

Installed electric capacity: **1,442.7 MW** (total)



Gross values, not adjusted for percentage of ownership interests (including the minority interests).



## GERMANY

**EnBW** (EDF 46.07% owned and voting rights)

Sales contribution:

**€6.9 billion**

- Electricity Generation
- Electricity Transmission and Distribution
- Gas Transmission and Distribution,
- Electricity and Gas Sales
- Services

Numbers of customers: approximately **6 million** (including gas).

Electricity installed capacity: **15.0 GW**

Gas activity: **75.2 TWh**

Gross global gas volumes handled by the Group's companies including plants' internal consumption



## ITALY

Sales contribution:

**€4.7 billion**

**Edison** (EDF 48.96% owned and 50% of voting rights)

- Electricity Generation
- Electricity Sales
- Gas Production, Storage and Sales

**187,000 customers** (including gas)

Electric Installed capacity:

**12.5 GW**

Gas activity: **13.8 Gm<sup>3</sup>**

**Fenice** (EDF 100%)

- Electricity Generation
- Energy and Environmental services

Electricity installed capacity:

**328 MW**

Thermal installed capacity:

**2,886 MWth**

Gross global gas volumes handled by the Group's companies including plants' internal consumption

With: thermal W for cogeneration, as opposed to electric W.



# Key figures 2007

**Altitude performance program (2005-2007):**

**Targets were exceeded by more than 20%, with a €1.2 billion impact on EBITDA.**

## 2007 GROUP SALES

In € billion

**+ 1.2%**



\*The €58.9 billion and €59.6 billion amounts correspond to the sum of the precise values, corrected to one decimal place.

\*\* Fenice, EDF's stake in Edison: 48.96 % consolidated in 2007 versus 51.58% in 2006.

\*\*\* 46.07 % stake in EnBW in 2007.

## 2007 GROUP EBITDA\*

In € billion

**+ 5.7%**



\* After the reclassification of net allocation to provisions for renewal below EBITDA in the amount of (€463 M) in 2006 ((€504 M) in 2007).

\*\* After the reversal of provision of €262 M linked to the effect of implementation texts of 28 June, 2006 Law on nuclear waste.

## NET INCOME (GROUP SHARE) AND GROUP'S NET INCOME FROM ORDINARY OPERATIONS\*

In € million



NET INCOME (GROUP SHARE)

GROUP'S NET INCOME FROM ORDINARY OPERATIONS

\* Excluding non-recurring items.

\*\* +12.0% at constant scope and exchange rate.

MEDIAPEQUE EDF - SAMUEL BOLLENDORF



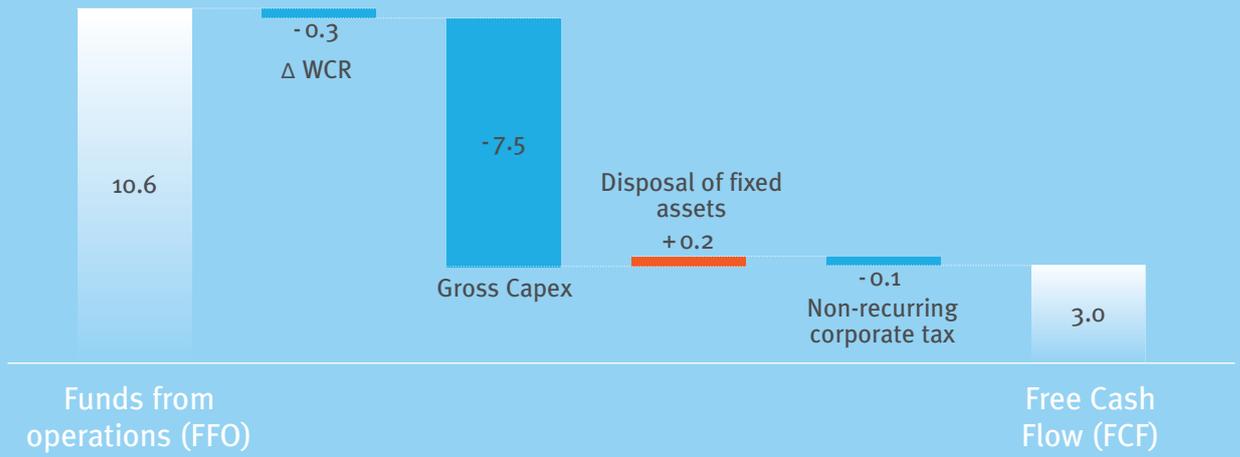
### Distribution

## Creation of ERDF

On July 1, 2007, the EDF Group began conducting its sales and marketing activities in a fully deregulated European energy market. Since January 1, 2008, ERDF, a wholly-owned EDF subsidiary, handles distribution operations in France, just as RTE manages the transmission activities.

## 2007 FREE CASH FLOW

in € billion



MÉDIAPROFIL - WILLIAM BEAUCARDET

**€1.28**

per share

Share dividend proposed in 2007

**€1.16**

in 2006

**Operational Excellence**  
performance program

**Target of**  
**€1 billion**  
gain in EBITDA in 2010 vs 2007



DR

COMMUNICATION

### E = less CO<sub>2</sub> campaign

Tackling climate change is a priority for all. As part of its contribution, EDF launched the *E = less CO<sub>2</sub>* guide, a simple and accessible tool to increase consumer awareness of the urgency of decreasing their CO<sub>2</sub> emissions. The guide features tips on good habits that help keep energy consumption in check.



# Key figures 2007

Between 2008 and 2010, the EDF Group plans to invest more than

**€35 billion**

in generation and networks over three years, including €20 billion in France.

## ACCELERATION OF OPERATING INVESTMENT SINCE 2005

in € billion



- Investments in generation doubled in France since 2005.
  - 2007 investments of €7.5 billion, semi-financed by FFO of €10.6 billion.
  - Maintained financial flexibility: debt ratio\* of 36%.
- \* Debt ratio = Net financial debt / (Net financial debt + shareholders' equity)

## Environmental performance

EDF's CO<sub>2</sub> emissions in Europe **143 g/kWh**

Average CO<sub>2</sub> emissions in the European Union **372 g/kWh**

EDF's CO<sub>2</sub> emissions are almost **three times** lower than the sector average for Europe

Source: EDF 2006 / IEA 2005



Pierre Gadonneix and Michael J. Wallace, Chairman and Chief Executive Officer of UniStar Nuclear Energy LLC.

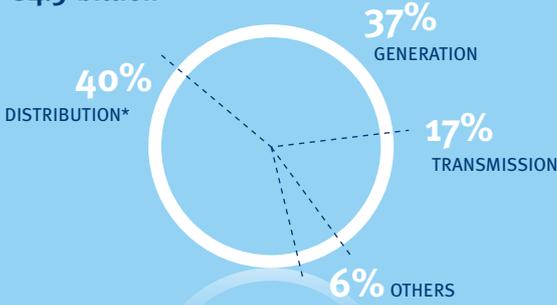
## Strategic partnership in the United States

On July 20, 2007, EDF and the US electricity company, Constellation Energy Group (CEG), signed an agreement concerning the creation of a 50/50 joint venture, called UniStar Nuclear Energy (LLC). The goal is to jointly design and develop, build, own and operate EPR type nuclear plants in the US.

# INVESTMENTS IN ALL SECTORS AND IN ALL GEOGRAPHICAL AREAS IN 2007

## France

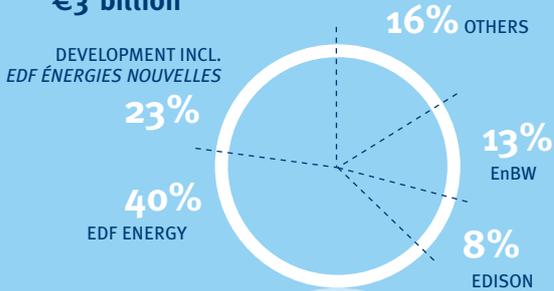
€4.5 billion



\* Including investments in Island Energy Systems (SEI).

## International

€3 billion



- New generation capacities (France, Italy, United Kingdom).
- Maintenance of industrial assets (France, Germany).
- Development of networks (France, United Kingdom, Germany).
- Acceleration of investment in wind power (via EDF Énergies Nouvelles).



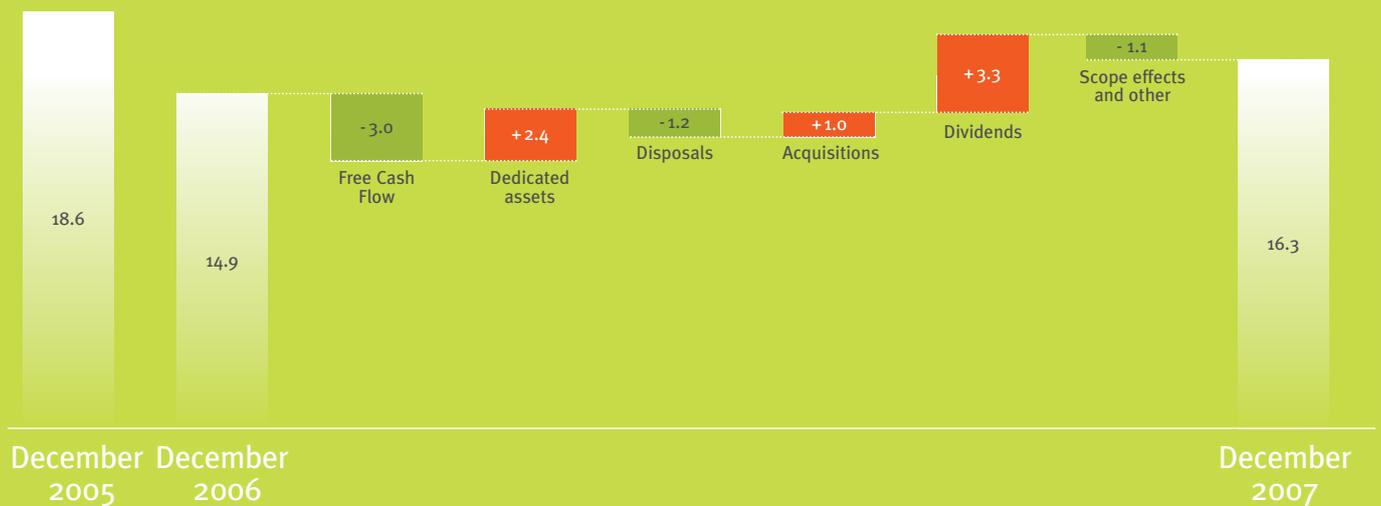
copyright : sensation / Fourmiller

### PLUG-IN HYBRID VEHICLE

## Cooperation with Toyota

Toyota's plug-in hybrid vehicle features a gas-powered engine and rechargeable electric motor. The objective is to reduce the environmental impact of cars, notably in urban areas. With EDF's assistance, the prototypes have been equipped with a new smart charging and invoicing system; a number of them will be integrated into EDF's fleet for testing on public roads in France. This could be a decisive step in helping Europeans recognize that electric cars are a relatively economical way to reconcile their need for individual transport with economic growth and environmental protection.

## CHANGE IN NET FINANCIAL DEBT



# SHAREHOLDERS AND THE STOCK MARKET



MÉDIATHÈQUE EDF – MANUELE TOUSSAINT

On May 24, 2007 EDF organized its first carbon-neutral Shareholders' Meeting. Greenhouse gas emissions were reduced from 95 to 47 tonnes, offset by a photovoltaic installation which replaced a diesel-powered generator. All EDF Shareholders' Meetings will henceforth meet the same standards, involving the calculation of the carbon footprint, the reduction in emissions and their offsetting.

## Shareholders: strengthening **relations**

Ongoing, personalized contact with shareholders was pursued in 2007 in a series of meetings and one-on-ones. The year was marked by the disposal of 2.5% of the French State shareholding.

### BREAKDOWN OF EDF'S SHARE CAPITAL AT DECEMBER 31, 2007

**84.85%**

FRENCH STATE

**1.90%**  
EMPLOYEES

**13.25%**  
INDIVIDUAL AND INSTITUTIONAL SHAREHOLDERS

### Fostering dialogue

EDF has developed its relations with the financial community by organizing meetings on its half-year and annual results, as well as addressing a number of specific themes. The Group maintained an ongoing dialogue with financial analysts and institutional investors in the leading financial markets in France, Europe, the United States and Japan to keep them informed on any significant developments and on its strategy, operating and financial performance.

For individual shareholders, EDF

management organized nine regional information and exchange meetings in France.

The Shareholder Advisory Committee held three meetings during its first full year of operation, attended by the Chairman and CEO and by EDF's top executives.

The Shareholders' Club, open to any shareholder, has 30,000 members. They were able to participate in 200 events: site visits, energy conferences, stock market teach-ins, and cultural and sporting events including the Rugby World Cup.

## 2008 Financial agenda

**February 13**  
Fourth quarter 2007 sales

**February 20**  
Annual results 2007

**May 7**  
First quarter 2008 sales

**May 20**  
General Shareholders' meeting

**August 01**  
Half-year results 2008

## Grand prize winner: ranked third best shareholder website by *BoursoScan*

### A new development for EDF's share capital

On December 3, 2007, the French State sold 2.5% of EDF's share capital, or some 45 million shares valued at €3.7 billion, via a placement reserved for institutional investors.

At the Special Shareholders' Meeting of December 20, the shareholders approved the transfer of EDF's distribution activities in France to the French distributor (*Électricité Réseau Distribution France - ERDF*).

### Increasing the number of employee shareholders

Within the framework of the French State's sale of 2.5% of EDF's share capital on December 3, 2007 as French law provides, employees and former employees will be invited to participate in 2008 a new employee

## Grand prize winner: fourth best employee shareholding scheme

offering, representing 15% of the total transaction volume, or around 0.4% of the share capital.

During the 2005 IPO, 75% of the employees in France and 50% of the employees in the major European subsidiaries and affiliates became shareholders in EDF. At December 31, 2007, they owned 1.9% of the share capital. Since 2006, they have had access to an EDF Share Fund within the employee shareholding scheme (*Plan d'épargne Groupe*), in which they can continue to invest a portion of their savings with EDF's help. In 2007, EDF launched a bonus issue of nearly three million shares (0.16% of the share capital) for employees in France and most of the countries where the Group has operations, whose award is linked to the achievement of the Group's EBITDA growth target for the 2006-2008 period.

### INVESTOR MEETINGS IN 2007

11 roadshows

1 Investor Day in London

2 analyst conferences for the half-year and annual results

• 9 investor conferences focused on the businesses or the market

• Nearly 400 one-on-one meetings with investors

### INVESTOR DAY

At this theme day held in London for the financial community, EDF management presented the following subjects:

- The EDF Group's market environment
- Supply strategy on the main markets
- Group challenges in sales and marketing development
- International nuclear strategy

The full presentation can be found on the website [www.investisseurs.edf.com](http://www.investisseurs.edf.com)

### FOR MORE INFORMATION AND TO CONTACT US

The EDF shareholder website [www.actionnaires.edf.com](http://www.actionnaires.edf.com).

*The Shareholder Letter*. Published three times a year and sent to nearly one million shareholders, it can be consulted on the website.

The toll free number 0800 000 800 with a team of online advisors. 18,750 calls in 2007.

The electronic mailbox, [actionnaires@edf.fr](mailto:actionnaires@edf.fr). 2,353 answers questions about the Group, financial news and employee shareholding.

The investor relations website [www.investisseurs.edf.com](http://www.investisseurs.edf.com).

Relations with individual shareholders and employee shareholders: Gilles Gateau at [actionnaires@edf.fr](mailto:actionnaires@edf.fr).

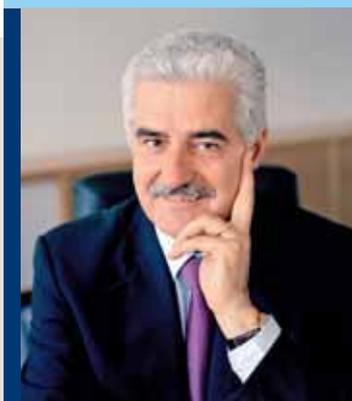
Investor relations: David Newhouse at [comfi-edf@edf.fr](mailto:comfi-edf@edf.fr).



### EDF SHARE PRICE SINCE THE IPO AS AT MARCH 31, 2008

— EDF  
— € Stoxx Utility  
— CAC 40

Source: Thomson financial



The Group has delivered on all its commitments. The market recognizes its performance, productivity and sound fundamentals: EDF is the leading player in the nuclear sector and one of the most powerful electricity producers in the world.”

Daniel Camus, Chief Financial Officer.

# A STRATEGY OF INVESTMENT



UNPRECEDENTED GLOBAL ENERGY CHALLENGES	26
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STRENGTHENING THE BUSINESS IN EUROPE	38



## Global economic growth

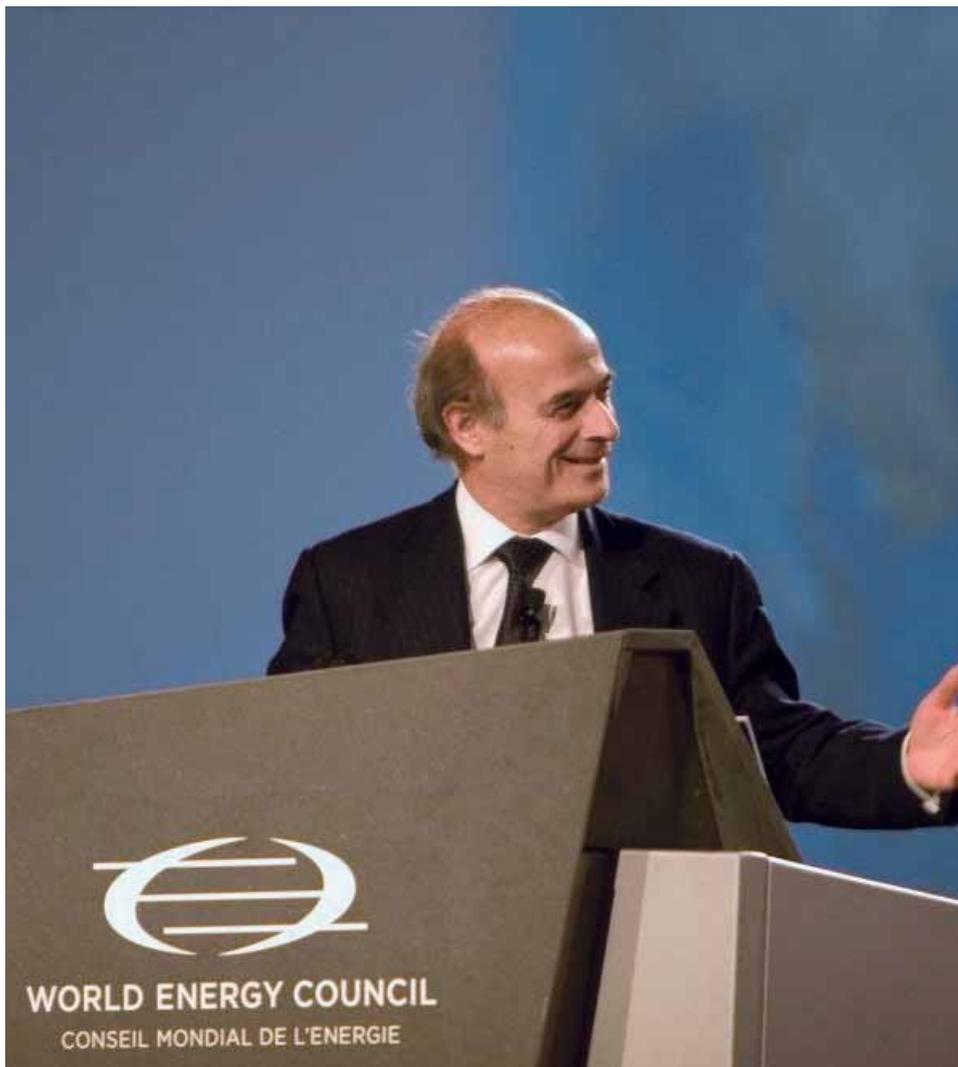
and the dynamism of developing countries are the two drivers behind rising energy demand. To date, each generation has used 50% more energy than the previous one, depleting 80% of fossil fuel resources. This situation is not sustainable: it increases greenhouse gas emissions, the main cause of climate change, and increases the cost of access to hydrocarbon resources, particularly affecting the poorest countries and populations.

Faced with these challenges, the EDF Group's strategy consists of investing in building a sustainable energy future, reconciling economic growth, the preservation of the climate and the environment, supply security and reducing global inequalities. We already have robust and competitive solutions: energy efficiency on the demand side and zero-carbon electricity generation based on nuclear and renewable energies.



# Unprecedented global energy challenges

MÉDIATHÈQUE EDF – MARIE-ÉLISE HO VAN BA



The kind of growth we have relied upon until now cannot be sustained because it is disrupting the ecosystem by provoking climate change. Nor is curbing growth an option, as it would increase inequality. We need to move towards responsible growth, reconciling economic development, climate preservation and the reduction of global inequalities. We must find ways to do more with less. We have a historic opportunity to plan massive investment in such a way as to reduce carbon emissions. We know that doing nothing today will prove even more costly in the future.



**Pierre Gadonneix**  
in his inaugural speech as Chairman  
of the World Energy Council<sup>1</sup>  
Rome, November 2007

 **Between 2005 and 2030**

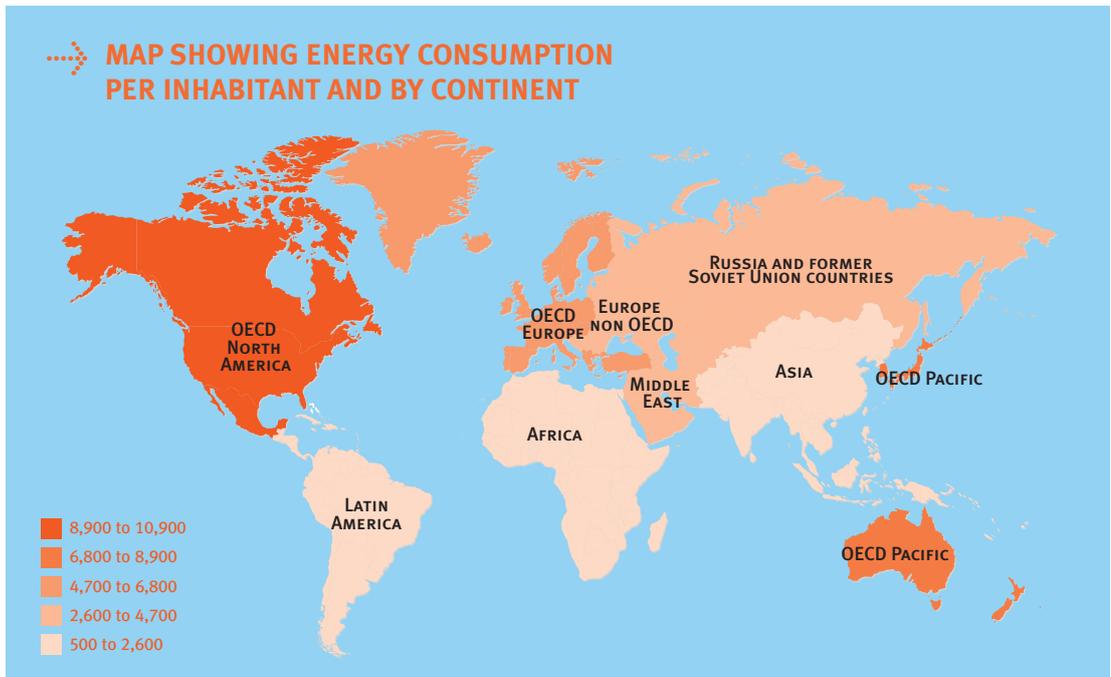
**+ 1.7 billion**  
Global population

**+ 4.7% annually**  
Emerging country growth

Source: International Energy Agency (IEA).



MAP SHOWING ENERGY CONSUMPTION PER INHABITANT AND BY CONTINENT



Source: IEA Energy Statistics.

© 2007 OECD/IEA.

**A considerable need for energy assets**

Between 2005 and 2030, global energy consumption is expected to grow by 50%<sup>2</sup>. During this period, demand for electricity should double. This forecast already includes a significant increase in energy saving. Given this demand outlook, countries will need to invest in their energy assets. The European Union plans to build between 600 and 700 GW of electricity generation capacity over the next 25 years, or between six and seven times the installed power of the EDF fleet in France. At the same time, the United States is expected to bring on line 800 GW, China 1,300 GW and India 400 GW<sup>3</sup>.

**A threat to resources and the climate**

Currently, two-thirds of electricity generation is fossil-fired. This poses a dual problem in terms of resources and climate. And yet access to hydrocarbons to meet the increase in demand is becoming increasingly costly. The price of a barrel of

oil has increased from €20 to €80 in the space of five years. According to forecasts from some oil companies, peak oil, after which production will decline, will be reached in 2030 and peak gas around 2050. North Sea production has already peaked.

Coal appears to be the most abundant fossil fuel. But, for an equivalent amount of electricity generation, it releases twice as much CO<sub>2</sub> as gas-fired generation. The conclusions of the IPCC<sup>4</sup> in 2007 on the increase in greenhouse gas concentrations in the atmosphere and its effect on global warming are well known. The need for urgent action to

**Peak oil forecast for around 2030**

**Peak gas forecast around 2050<sup>5</sup>**

1 *Conseil mondial de l'énergie* or World Energy Council (WEC).

2 Sources: International Energy Agency (IEA) and the World Energy Council.

3 Source: IEA.

4 Intergovernmental Panel on Climate Change.

5 Sources: Total, IFP.



**+ 2.2%**  
OCDE growth

**+ 55%**  
Global energy demand

**+ 57%**  
CO<sub>2</sub> emissions



MÉDIATHÈQUE EDF – ALEXIS MORIN



EPR construction site at Flamanville. One advantage of nuclear electricity generation is that it is carbon-free.

deal with this situation is now widely understood, as demonstrated in the European Union position or the Earth Summit in Bali in December 2007. In France, the mobilization around the national conference on the environment (*Grenelle de l'environnement*) and the commitment to dividing French CO<sub>2</sub> emissions by four by 2050 testify to this awareness.

### Eco-efficient demand-side solutions

We can slow down the depletion of resources and stop the escalation in climate change without opting for economic recession: effective technologies already exist for demand-side eco-efficiency.

In buildings, in addition to insulation and low-energy lighting, there are decentralized generation solutions such as solar water heaters and heat pumps that can reduce energy consumption and CO<sub>2</sub> emissions by between 20% and 40%. For transportation, particularly in urban environments, there are alternatives to automobiles and oil: tramways, buses, electric vehicles, bicycles, etc. In the industrial sector, technologies like induction furnaces enable us to heat only the objects concerned, without wasting heat. Most of these solutions call for electricity, which is proving to be the energy of the 21<sup>st</sup> century. This explains why the IEA and WEC forecast that demand for electricity is due to increase twice as rapidly as other energies.

### Generation solutions

For electricity generation, low-carbon technologies are already operational. EDF's generation fleet in France is just one example. Thanks to its nuclear plants and hydropower facilities, it generates competitive energy, 95% of which is carbon-free. For every kWh generated, EDF emits 3 times less CO<sub>2</sub> than the European energy company average. Wind power is growing and offers competitive solutions in the right conditions. Solar photovoltaic and



MÉDIATHÈQUE EDF – LAURENT ROTHAN

Electric trams, buses and bicycles, all alternatives to cars and oil.





thermal enable local energy generation without CO<sub>2</sub>.

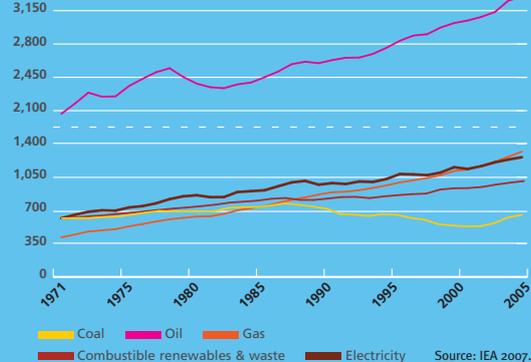
As for fossil-fired plants, their performance can be enhanced to emit less CO<sub>2</sub> per kWh generated with combined-cycle gas turbines (CCGT) or supercritical coal-fired plants, for example. Carbon capture and storage is the subject of research programs in which EDF is actively involved.

### A time for choices

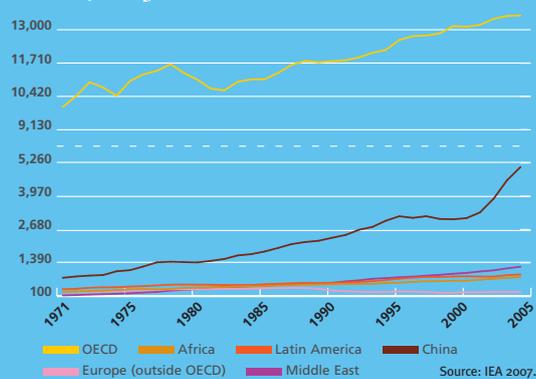
The need for massive investment in generation gives us a historic opportunity to opt for low-or zero-carbon technologies as of today.

This is why, given the concern for energy independence and climate preservation, investment in wind power is seeing significant growth and many countries are showing renewed interest in nuclear. While this is not the only option, it will prove one of the main solutions. Having long been skeptical, the IPCC adopted a positive stance in its latest report, and the European Union Council meeting of March 2007 referred to "the contribution made by nuclear energy to meeting the growing concerns about safety of energy supply and CO<sub>2</sub> emissions reduction". EDF believes that 160 GW of nuclear could be built worldwide between now and 2020.

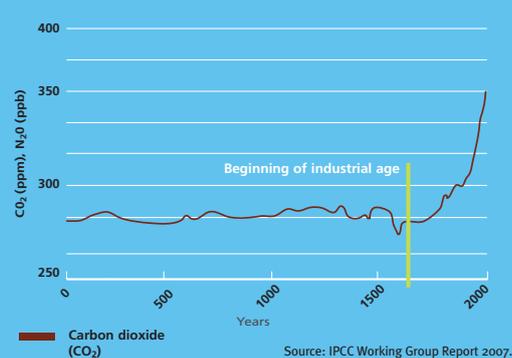
### EVOLUTION FROM 1971 TO 2005 OF OECD TOTAL PRIMARY ENERGY SUPPLY BY FUEL (Mtoe)



### CO<sub>2</sub>: GLOBAL EMISSIONS BY REGION (in MtCO<sub>2</sub>)



### GREENHOUSE GASES: ATMOSPHERIC CONCENTRATIONS



### EUROPEAN UNION TARGETS FOR 2020

Reduce greenhouse gas emissions by 20% on 1990 levels

Increase the share of renewable energies in final energy consumption to 20%

Increase energy efficiency by 20% (\*) in the European Union

\* Energy efficiency is usually measured in terms of final energy intensity (relationship between energy consumption and GDP).



# Five strategic priorities

- Having achieved the objectives of its industrial project launched in 2004, the EDF Group is entering a new phase of growth and investment. Its strategy aims to respond to growth in demand and to the global challenges of climate change and supply security, while establishing the Group as a leader in sustainable development.

MÉDIATHÈQUE EDF – JEAN-LIONEL DIAS



## 2004-2007: delivering on commitments

The commitments outlined in the 2004-2007 industrial project were delivered in full.

The Group Performance program called for an around €1 billion impact on 2007 Group EBITDA compared with the 2004 level, not taking into account costs associated with transforming and adapting the Group ahead of market opening on July 1, 2007 and a €1.5 billion improvement in working capital requirement in 2005-2007. The impact of the program on Group EBITDA for 2005, 2006 and 2007 (€1.220 billion) ultimately exceeded this target by more than 20%. The sale of non-strategic assets continued and, in 2007, EDF disposed of its generation units in Mexico. The total impact on consolidated net debt exceeded the objective of €5 billion at the end of 2007. The Group also sold its remaining

## 2008-2012 – 5 priorities: invest sustainably in

the global  
**nuclear revival**

**renewable energies**  
and **energy efficiency**



# The Group uses three key criteria to screen investment and development plans

- **Consistency with overall strategy**
- **Profitability**
- **In countries where EDF is welcome**

25% shareholding in Edenor during the IPO launched by this company in New York and Buenos Aires.

The Group re-launched its investment in generation and networks. Its operating investment has tripled since 2004. In France, the Flamanville EPR unit site and the program to build combustion turbines and reactivate peak load fossil-fired plants is on schedule. Within the Edison 2003-2007 industrial plan, the company brought on line 7,000 MW, while EDF Energy increased its generation capacity. Full market opening in continental France, involving 27.2 million points of delivery, went according to plan. EDF implemented the unbundling of its distribution and sales and marketing businesses. This major transformation, which concerned thousands of employees and involved the review of numerous processes, went smoothly, with a constructive employee dialogue on training, recruitment and subcontracting. The EDF Customer Branch

went on the offensive in launching its new brand *Bleu Ciel d'EDF*.

The Group made progress on establishing its gas strategy, consolidated its European governance and functioning, leveraged synergies and mobilized its teams.

## 2008-2012: five priorities

Faced with changes in its market and the planetary urgency of global warming, the EDF Group places sustainable development at the heart of its strategy. This focuses on the five key priorities presented to the Board of Directors on November 7, 2007. It plans to invest sustainably in:

- The global nuclear revival,
- Renewable energies and energy efficiency,
- Generation and networks in France,
- Strengthening its leadership position in Europe,
- Securing gas supply.

→ The sale of the Mexican plants is part of the strategy to diversify the asset portfolio by focusing on the construction, operation and resale of independent generation facilities. In this way, the Group can maintain its expertise in a wide range of electricity generation technologies. It still owns the Norte Fluminense plant in Brazil, Phu My in Vietnam, Azito on the Ivory Coast and Nam Theun in Laos.

→ In France, one of the year's major events was the national conference on the environment (*Grenelle de l'environnement*), which mobilized the entire country around the issue. EDF focused its message on the need to give priority to reducing CO<sub>2</sub> emissions and committed to cutting emissions from its own generation fleet.

MÉDIATHÈQUE EDF - RICHARD SCHROEDER



We are convinced that a greener world will necessarily be a more electric world, consuming less electricity per end user but developing still more uses for electricity. This is why our strategy focuses on investing in both zero-carbon generation and energy eco-efficiency.”

**Jean-Louis Mathias**

Chief Operating Officer, Integration and deregulated Operations in France.

**generation and networks in France**

**strengthening its leadership position in Europe**

**securing gas supply**



# 1/ Investing in the global nuclear revival

- Nuclear electricity generation has the threefold advantage of being competitive and insensitive to fossil-fuel prices and emitting no CO<sub>2</sub>. It is seeing renewed interest in many countries. As the global leader in nuclear generation, with extensive experience and proven know-how, the EDF Group is participating in co-investment projects in which it can play an active industrial role. The construction of the new EPR-type reactor in Flamanville (Manche) gives it unequalled legitimacy and credibility.

## Four priority countries

- **The United States**
- **China**
- **The United Kingdom**
- **South Africa**

### A leading industrial player

EDF is the leading nuclear operator in the world with 58 reactors in operation and 30 years of experience in this field. The Group generates competitive electricity and enjoys an exemplary safety record.

EDF's key strength is its in-house engineering. The design, construction and operation of a fleet with common technological standards has given the Group unique engineering expertise, particularly in the management of large-scale projects.

In France, EDF is overseeing the construction of a first EPR-type unit at Flamanville 3. Internationally, the level of EDF's participation is adapted to each individual situation, depending on the partner and the industrial specification.

### THE UNITED STATES: a major partner

The United States has the largest nuclear fleet in the world, owned by numerous different operators. The country decided to revive nuclear back in 2005, with the Energy Policy Act. In 2007, EDF concluded a major agreement with Constellation Energy Group, which operates five nuclear units in Maryland and New York State. The two companies created UniStar Nuclear Energy (LLC), a 50/50 joint venture. to build a series of four EPR-type

reactors, of which the first will be built at Calvert Cliffs (Constellation's base in Maryland) for commissioning in late 2015. EDF's experience with Flamanville 3 and its ability to generate a scale effect will underpin its contribution to project management and operations.

Under this agreement, EDF may purchase up to 9.9% of Constellation's outstanding common shares in the market within five years, becoming its primary industrial partner.

Together with Constellation, EDF will also look at investment opportunities elsewhere in the United States and in Canada.

### CHINA: investing with a historic partner

EDF has been working in China for the past 20 years. Its engineers were involved in the construction and commissioning of the Daya Bay and Ling Ao nuclear plants. The company has also invested in coal-fired plants.

In November 2007, EDF signed a joint-venture agreement (EDF around one third) with its historic partner, China Guangdong Nuclear Power Company (CGNPC), for the construction of two EPR-type nuclear plants in Guangdong. The concrete foundation slab of the first unit is planned for 2009.

## NUCLEAR INVESTMENT

EDF is committed to EPR technology in four priority countries which already have experience in nuclear generation.

## UNITED STATES

The United States is the largest energy market in the world, with total sales of 3,670 TWh and a forecasted average annual growth rate of 2% between 2007 and 2010.

(Source: Energy Information Administration, 2006.)

## CHINA

Nuclear generation fleet: **7,000 MW** in 2007.

Annual growth in electricity demand: far higher than in Europe (15% per year on average, compared with less than 2% per year in Europe). The proportion of Chinese nuclear-generated electricity is expected to double by 2020.

As planned since 2004, the concrete for the first part of the slab for the floor of the Flamanville 3 nuclear reactor was poured at the beginning of December. At the end of 2007, 95% of the contracts had been signed, securing the cost at the expected level of around €3.3 billion in terms of 2005 euros. The site currently employs 700 individuals, a figure which is expected to rise to 2,000 at the height of its activity. It brings together players from all sectors of the French nuclear industry, in particular Bouygues, Areva and Alstom. The construction of this state-of-the-art EPR will showcase EDF's expertise in managing such projects.

## UNITED KINGDOM: contributing to fleet renewal

In the United Kingdom, apart from the pressurized water reactor brought on line in 1995, all the nuclear plants are expected to reach the end of their lifespan between 2015 and 2025. Faced with soaring hydrocarbon prices, the depletion of North Sea oil reserves and the climate risk, the country has reviewed its energy policy and plans a new phase of nuclear as of early 2008. Through its subsidiary EDF Energy, the EDF Group is committed to playing an active role in the British government's consultation process. It aims to build and operate four EPR-type nuclear reactors replicating the Flamanville 3 model, either alone or in partnership, subject to the appropriate regulatory and political environment. Two steps were taken in this direction in 2007: the first, with Areva, to request generic design approval for the EPR from the UK regulatory authorities, and the second to look for possible sites.

## SOUTH AFRICA: an investment opportunity

In order to meet its electricity demand growth, South Africa is looking to double its installed capacity (from 42 to 80 GW) by 2030. This country already has two nuclear units and has announced its program: a call to tender for 3,000 to 3,500 MW of pressurized water technology, followed by a commitment to 20,000 MW over 15 years. As a long-term partner of South African operator Eskom, EDF together with Areva – the leader of the consortium regrouping engineering specialist and local partner Aveng and Bouygues – has submitted a bid for the construction of EPR-type nuclear plants representing 3,000 to 3,500 MW.



First concrete pouring at EPR site in Flamanville.

MÉDIATHÈQUE EDF – PHILIPPE ERANIAN



## 2/Investing in renewables and energy eco-efficiency

→ Energy efficiency and renewables save fossil resources and do not emit greenhouse gases. As the leading producer of hydroelectric power in Europe, the Group is confirming its leadership position in renewable energies, supported particularly by EDF Énergies Nouvelles. Each of the Group's companies deploys energy efficiency offers in its national market.

Wind turbines at Castiglione Messer, in Italy. In 2007, Edison brought 10 MW of wind power into service and an additional 84 are being built.



MÉDIATHÈQUE EDF - PHILIPPE ERANIAN

### Wind power experiencing worldwide growth

With strong positioning in Europe and the United States, EDF Énergies Nouvelles (50% owned subsidiary of EDF) owes its success to its dynamism in international markets. The company is mostly counting on wind power to achieve its target of total installed capacity of 3,300 MW net around 2011. In 2007, it exceeded the 1,000 MW net installed capacity level and launched a record number of new construction projects in Europe and the United States. The turbine supply has been secured through agreements with the major manufacturers globally. In the United Kingdom, EDF Énergies Nouvelles is working with EDF Energy on building a substantial portfolio of onshore and offshore windfarms. In September, EDF Energy received authorization for an offshore project to build 90 MW in Northeast England. The company is also investing in other renewable energies and has rapidly

### → Edison 2008-2013

**€1 billion** for renewable energies, or double the previous target

**2,700 MW** installed capacity in Italy and other countries in 2013



expanded its solar business with several hundred megawatts under development in France, Italy, Spain, Greece and the United States. It has signed a number of contracts with manufacturers of photovoltaic modules. It is also entering the biogas and biofuel markets in Belgium.

### The deployment of distributed energies

EDF EnR Réparties (EDF EnR), 100% owned by EDF, and which in time is destined to be co-owned by its subsidiary EDF Développement Environnement SA ('EDEV') and EDF Énergies Nouvelles, offers generation solutions based on renewable energies integrated within buildings (photovoltaic arrays located on roofs, solar water heaters, heat pumps and wood-fired heating). High temperature heat pumps are arriving at maturity and are moving to the industrial stage based on an EDF R&D patent.

### Launching energy eco-efficiency offers

In the Group's national markets, energy eco-efficiency solutions and services are already very much part of the sales and marketing offer.

In France, EDF has already contributed to numerous energy saving and distributed

renewables projects in homes, the service sector and industry. For the corporate sector, EDF is accelerating its sales and marketing effort to collect energy savings certificates with integrated services and installing, financing and maintaining efficient equipment.

In the residential market, EDF has launched its *Bleu Ciel d'EDF* brand which encompasses all its energy eco-efficiency offers. The Customer Branch has regrouped its supply, services and distributed renewables businesses in order to gear its entire offer towards energy eco-efficiency. In Martinique, Guyana and Reunion Island, EDF and its partners: regional authorities and the French Agency for Environment and Energy Management (*Agence de l'Environnement et de la Maîtrise de l'Énergie – Ademe*) have distributed nearly a million low-energy light bulbs to individuals. In the United Kingdom, EDF Energy has been marketing energy eco-efficiency services for several years. Its partnership with the London 2012 Olympic Games is focused on reducing CO<sub>2</sub> emissions.

In Italy, Edison offers energy efficiency solutions to its customers.

In Germany, EnBW is testing a smart electricity meter in the homes of more than 1,000 residential customers.

### Total gross installed capacity<sup>1</sup> and EDF EN Group share at 31/12/2007

(IN MW)	December 31, 2006		December 31, 2007	
	GROSS	NET	GROSS	NET
<b>WIND POWER</b>				
France	73.8	57.8	73.8	57.8
Portugal	143.8	86.6	143.8	86.6
Greece	75.4	74.1	111.4	110.1
Italy	0.0	0.0	164.1	77.9
United Kingdom	79.2	79.2	103.2	103.2
Germany	3.0	3.0	3.0	3.0
United States	437.6	306.2	618.6	432.8
<b>Total wind power</b>	<b>812.8</b>	<b>606.9</b>	<b>1,217.9</b>	<b>871.4</b>
<b>OTHER RENEWABLES</b>				
Hydro Biomass Thermal Solar	223.9	163.4	224.8	163.8
<b>Total EDF EN</b>	<b>1,036.7</b>	<b>770.3</b>	<b>1,442.6</b>	<b>1,035.2</b>

1. Total capacity of all EDF Énergies Nouvelles plants whatever the percentage of participation held by EDF Énergies Nouvelles.

### HYDROPOWER: THE LEADING RENEWABLE ENERGY

In France, EDF combines hydro and nuclear technologies to supply electricity which is 95% carbon free. The facilities are being developed particularly in Corsica, with the Rizzanese dam project, and on Reunion Island with the extension of the Rivière de l'Est dam.

EDF is also involved as a co-investor worldwide. In Laos, the company is lead contractor on the Nam Theun 2 Power Company project (35% owned by EDF) for a 1,070 MW hydropower facility to be commissioned in 2008.

### BIOMASSE

In July 2007, EDF Trading acquired Renewable Fuel Supply Ltd (RFSL). RFSL provides a biomass procurement service, logistical support and technical support to coal-fired generation companies wishing to 'co-fire' biomass with coal in their plants.



### WIND POWER GENERATION: PREDICTING THE UNPREDICTABLE

In 2007, EDF R&D developed the day-to-day forecasting of wind generation, using an analog method. This involves finding a day in the past when weather conditions were close to those forecast by French weather agency, Météo-France. This method will be refined with hourly forecasts and correlations between wind and generation once the fleet exceeds 2,500 MW.

## Partnership with the French Building Federation

**50,000 construction professionals** trained over two years in energy eco-efficiency techniques



## 3/Investing in industrial assets in France

→ France now needs new electricity generation capacity to meet rising demand. In France, EDF has embarked upon the largest investment program in Europe.

**€4.5 billion of investment in France in 2007**



→ **Peak capacity 4,215 MW (commitments made in 2005 and 2007)**

→ **Re-commissioning of the peak oil-fired units: Cordemais in 2007, Aramon 1 and Porcheville B1 in 2008**



### Generation, a new momentum

EDF is accelerating its investment in generation<sup>1</sup>. In addition to the Flamanville EPR unit, the re-commissioning of fuel oil-fired units, the construction of combustion turbines and the hydropower facilities in Corsica and French overseas departments launched in 2004, the Group decided on new investments in June 2007.

These involve the construction of three combined-cycle gas plants at Blénod (440 MW) and Martigues, where the oil-fired plant will be converted into two combined-cycle gas plants, each with capacity of 465 MW. The CCGTs emit the least CO<sub>2</sub> and nitrogen oxide of the technologies in the fossil-fired fleet and no sulfur emissions. These CCGTs will be similar to the three units EDF Energy will be building at West Burton, in order to benefit from synergies for greater purchasing power.

To bolster its extreme peak generation, EDF has also committed to 555 MW of combustion turbine<sup>2</sup> capacity at Vaires-sur-Marne and Montereau, in addition to the 550 MW at Vitry and Vaires decided in 2005.

EDF also invests in the heavy maintenance of its hydropower facilities (SuPerHydro program) and in the “housekeeping” of its nuclear plants.

In the French overseas departments, EDF has launched the renewal of six of its seven oil-fired plants.

### Networks: investments made by the regulated subsidiaries

Network investment in France is made by the specialized, legally independent subsidiaries: RTE (100% owned by EDF) for electricity transmission and ERDF (100% owned by EDF, created on January 1, 2008) for distribution. The two subsidiaries have ambitious equipment plans. In order to secure its network and strengthen its anchorage in the European system, RTE will increase its investment to an annual €950 million between 2008 and 2011.

Investment in the distribution network has risen by more than 12% between 2005 et 2007. In order to meet rising demand, modernize the industrial assets and reduce network sensitivity to extreme weather conditions, ERDF plans to invest more than €2 billion in 2008 (€1.7 billion in 2007 and €1.6 billion in 2006). One of ERDF's projects involves replacing the 35 million meters in France with smart meters. This is a ten-year project costing several billion euros. A pilot project has already been launched to deploy 300,000 meters over two years.

1. See *Generation in France* page 62.

2. *Turbine à Combustion* or TAC.



# 4/Securing gas supply



Natural gas is the fossil energy emitting the least CO<sub>2</sub> per kWh generated and security of supply is a critical issue for Europe and for its electricity generation.

The EDF Group's gas strategy therefore aims to meet the increased supply requirement created by its growth, and adopt a European approach in order to gradually position EDF as a gas player in its own right.

## A gradual, coherent approach

The EDF Group is present in the natural gas supply market mainly through EDF Energy in the United Kingdom, EnBW in Germany, Edison in Italy and EDF in France and Belgium. It is supported by EDF Trading, particularly for its operations in the wholesale markets.

The Group is building a secure and flexible diversified portfolio of assets, whether physical or contractual, in order to ensure its supply (procurement contracts, reserves) and logistics (gas pipelines, storage facilities, LNG chain). Investments are aimed at securing the supply for the company's power plants and for its direct customers, for whom it is developing a dual electricity and gas offer.

## A balanced geographical strategy

The Group is adding new projects in Northwest Europe to Edison's historical projects in Southeast Europe. In France, the public debate on the Dunkirk terminal was concluded in December 2007. This construction project, for which EDF has exclusive rights, involves capacity of at least 6 billion cubic meters per year in phase 1 (coming on line planned for 2012) and at least 12 billion cubic meters per year in phase 2.

EDF is going to invest with EnBW in an underground salt cavern gas storage facility at Etzel, in Germany. For its part, EDF

Trading has acquired regasification capacity in the Montoir LNG terminal in France for 2007 and 2008 and concluded an agreement with flexibility for interruptible deliveries of up to 4.5 billion cubic meters per year with Rasgas (Qatar) at the Zeebrugge LNG terminal in Belgium. EnBW is also participating in the LionGas terminal project in Rotterdam.

In Southern Europe, the construction of the Rovigo offshore terminal continues and is expected to come on line in 2008. There Edison will have access to 6.4 billion cubic meters per year of Qatari gas over a 25-year period. Edison continues to develop IGI gas pipeline projects between Turkey, Greece and Italy, and Galsi, between Algeria and Italy, the two amounting to annual capacity of 8 billion cubic meters. In June 2007, EDF established a consortium with Distrigaz, ENI and Essent, giving each company access to 0.2 billion cubic meters per year at the Fos Cavaou terminal, as soon as it comes on line, which is expected in 2008.

1. Liquefied Natural Gas.

2. Sales and own consumption included at 100%, which is to say not consolidated, excluding EDF Trading's gas activity and sales of gas produced by Edison outside Italy.

**120,000 gas customers**  
**(17.9 TWh delivered)**  
**in France, of which**  
**60,000 are residential**

**290 TWh<sup>2</sup> of gas**  
**sold or used**  
**in the Group's power plants**  
**in Europe**



## 5/ Strengthening the business in Europe

- Europe needs to build some 600 to 700 MW<sup>1</sup> of additional electricity generation capacity between 2005 and 2030 in order to meet demand. It needs powerful industrial companies, capable of committing to these technical investments over the long term. With its European focus, EDF plans to confirm its leadership position while respecting the values of the countries in which it operates.



MÉDIATHÈQUE EDF – ALDO SPERBER

The Renardières R&D laboratory. More and more synergies are being generated between EDF researchers in France, Germany and Italy.

### Synergies across all businesses

The Group's teams are looking to increase their synergies. EDF Énergies Nouvelles and EDF Energy are working together to build windfarms in England. EDF Energy is benefiting from EDF's experience in France and its backing in nuclear investment projects in the United Kingdom. EDF R&D is working with the R&D departments of Edison and EnBW and its engineers are studying, with EnBW, a super-critical coal boiler with 50% efficiency (38% currently).

In procurement, EDF in France and EDF Energy regroup their bids on calls for tender for gas turbines, while ERDF works with EDF Energy and EnBW for its HVA cable procurement (8,000 km annually between February 2008 and the end of January 2010).

Demasz in Hungary cooperates with SSE in Slovakia for its distribution activities and with SSE and Everen (Poland) in electricity trading, either directly or via EDF Trading. As the European leader in its sector, EDF Trading works for the whole of the Group in Europe.

**98%** of EDF's sales generated in **Europe**

**46%** of sales outside **France**





MÉDIATHÈQUE EDF – PHILIPPE ERANIAN

Gas storage site at Cellino Attanasio. Edison plans to invest €3.2 billion in natural gas production and reserves and to secure supply.

### Converging growth dynamics

Converging growth dynamics Edison, plans to invest €3.2 billion in natural gas and €3 billion in electricity between now and 2013. Edison is aiming to extend its electricity generation and gas production activities to Greece, the Balkans and Turkey. It plans to build a supercritical coal-fired power plant in Karlsruhe. These two large companies are thus committing to an investment effort consistent with that of EDF's in France and EDF Energy in the United Kingdom.

### Strengthening the positioning in Europe

The Group is already well positioned in France, the United Kingdom, Italy and Germany and is continuing to develop in other countries such as the Netherlands (construction of a combined-cycle gas plant with Delta NV), Greece and Turkey (via Edison and EnBW).

The gas strategy is an integral part of this European growth dynamic, bolstering the Group's position in the European gas

market and leveraging significant synergies. In the Central and Eastern European countries, and even Russia, EDF plans to continue its development in building on its current positioning together with EnBW and Edison.

## €1 billion EnBW investment in a supercritical coal-fired power plant

### A EUROPEAN APPROACH

The British experience helped EDF prepare for the opening of the residential market in France, with EDF Energy employees assisting in the setting up of the customer platforms. The Lyon call center has a British manager. EDF and EnBW are increasing their cooperation, particularly in nuclear operations and hydro and fossil-fired operations.

1. European Commission estimate (Source : *Etude de la DGTREN – Trends to 2030 – update 2005*).
2. See section on Edison and EnBW in this report.

## 11 countries

The Group's coordinated sales and marketing network

## €300 million

Purchasing capacity of the Group's Carbon Fund, pulled by EDF Trading

# THREE DRIVERS OF SUSTAINABLE GROWTH



# Drivers

HIGHLY-SKILLED, MOTIVATED TEAMS

42

RESEARCH AND DEVELOPMENT GEARED TO SUPPORT AND PLANNING

46

A POLICY OF ENVIRONMENTAL AND CORPORATE SOCIAL RESPONSIBILITY

48



## To support its strategy, the Group is investing in the skills and motivation of its teams.

Recruitment is being increased in high-growth sectors, such as nuclear generation and sales and marketing.

The Group is building the future with pro-active R&D, with state-of-the-art resources focused on two objectives: to contribute to EDF's competitiveness in providing the teams with the most effective tools, methods and techniques and to prepare for long-term developments through its research programs. The EDF Group's objective is to grow sustainably, limiting its environmental footprint and providing current and future generations with effective solutions.



# Highly skilled, motivated teams



Market opening and the distribution subsidiary, regulatory change, reform of the special pension schemes in France: EDF has implemented a policy of profound change while maintaining its internal cohesion, in honing its strategy for skills renewal and pursuing the integration of the Group.



The Gravelines plant. Here, two apprentices out of the 300 recruited in 2007 by the nuclear division.

## Winning through competence

### Forward-looking businesses

Faced with the retirement of numerous employees in the near future, skills renewal is a major challenge. EDF plans for this within a context of headcount optimization. The company is establishing forward-looking programs in each of its businesses.

### Different career paths

For EDF, resource optimization is an ongoing priority and the company is implementing an oriented mobility program with targets set by branch and division. Employees are thus able to pursue a number of different career paths. They benefit from significant resources offering training and support for geographical mobility in terms of housing, employment for a spouse, etc. A new employment mobility information



**23,000 employees**  
changed their job specifications  
in France in 2007

**6,000 individuals**  
transferred from  
distribution to sales  
and marketing



# Three major priorities

- Adapting jobs and skills
- Motivating employees through attractive working conditions
- Encouraging workplace dialogue

system was created in 2007. Accessible to all EDF employees in France, it provides information on available job opportunities and gives all the entities a detailed picture of employee mobility.

## A recruitment dynamic

In order to adapt their businesses and skills in line with the Group's development, EDF and ERDF plan to recruit around 14,000 people in France over the next five years. In nuclear, the company will recruit 500 engineers each year over the next five years, a threefold increase on previous levels. To attract talented individuals, EDF has launched a communication campaign to promote its "employer brand". The objective: to show young graduates that, with EDF, they can put their education to work while gaining a career path. A special website ([www.edfrecrute.com](http://www.edfrecrute.com)) has been set up. At the Energy Day, held at the *Cité des sciences et de l'industrie in Paris*, 1,000 engineering students found out about the Group's businesses and were offered 350 internships.

## Training more in tune with the businesses

In order to support its employment policy, EDF has reorganized its training programs.

The new EDF Vocational Training entity is structured around the main businesses in order for training to be more in tune with their needs and involve managers and employees more closely. Specialist structures coordinated at national level have thus been created: Generation, Sales and Marketing, Distribution, Management and the National Expertise Structure.

## Strong growth in apprenticeship

Apprenticeship is one of the drivers in skills renewal. The company achieved its target, set in 2005, to increase the number of apprentices by 20% over a two-year period. Ahead of the application of the new French law relating to a first job for young people, EDF already has 1,000 apprentices (3% of headcount) in its Generation Branch. They are supported by highly-motivated mentors and most will go on to be recruited by the Group. Some will find employment with companies which provide services, and in which EDF is keen to secure skill levels. In 2007, more than 70 apprentices were being trained in Nuclear Operations within the framework of contracts with service providers guaranteeing their first job.

## → NUCLEAR GENERATION

EDF conducts regional operations to identify employees in service functions with the potential to move to technical positions. The Meet Nuclear Operations sessions (*Carrefours de la Division Production nucléaire*) were thus attended by 350 employees, of whom 120 chose to join the Division after training.

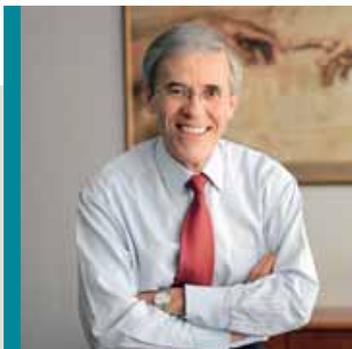
**300** apprentices recruited in 2007

**40** more young executives recruited in 2007 by the nuclear fleet in France in order to create a pool of international executives: after experience of an operating role in a power plant, they will be available for international postings

## → TRAINING

**900** employees from different professions became customer counselors after an average of 50 days of training

**26** European Key Account Managers in sales and marketing trained to work as a network in multi-cultural environments



“Respect for individuals, environmental responsibility, striving for excellence, a commitment to the community and the necessity of integrity: our Group values give us a significant advantage in attracting and securing the loyalty of the talented people we need.”

Yann Laroche, Chief HR and Communications Officer



MÉDIATHÈQUE EDF – PHILIPPE ERANIAN

EDF Energy headquarters in London. Group companies implement their own HR policies to comply with local law but all foster the EDF Group values.

## Employee benefits system harmonized for Bert employees in Hungary since January 1, 2007



### Mobilizing employees

#### Recognition and compensation

Compensation increasingly includes a variable portion, linked to both collective and individual performance. Furthermore, a bonus issue of 2.8 million shares has been decided and their distribution to the beneficiaries was the subject of an employee agreement in June 2007. Some 150,000 employees located in 22 countries will each receive an average of 19.2 shares. The vesting of the shares on August 31, 2009 is subject to continued presence during the vesting period and to collective performance targets: Group EBITDA growth (excluding changes in scope and exchange rate variations) averaging at least 3% per annum between 2006 and 2008.

#### Cohesion and shared values

The companies within the Group have their own separate human resource policies consistent with the laws and practices in their countries. The Group is nonetheless committed to developing cohesion between the teams and promoting a common ethic. An HR Team meets monthly with the Chief HR and Communications Officer to coordinate HR policies and their performance indicators. It has created a number of working groups, including Health and Safety, which reports on health and safety performance within the Group companies. In 2007, ten cross-Group projects were launched at the annual HR convention in Milan, on themes such as the "employer brand", working hours, etc. They are monitored monthly by the HR Team.

#### Health and safety in the workplace

The Health and Safety results continue to improve, justifying the deployment of the strategy first launched in 2003. At below four, the industrial injury frequency rate puts EDF amongst the top-ranked French companies and European energy players on this metric. In 2007, the branches, divisions and businesses made a sustained effort to prevent psycho-social risks. Following on from 2006, EDF initiatives continued to address public health issues: finalization of the influenza pandemic plan, conference on AIDS prevention. The updated Health and Safety policy will integrate the impact of organizational and management change on health in the workplace.

#### Quality of life in the workplace: a project-based approach

The human dimension and the quality of working conditions are priorities. Following a number of unfortunate events, the company created a workplace observatory on quality of life in the workplace (*Observatoire national de la qualité de vie au travail*), strengthened its ethical guidelines and simplified its procedures to encourage a more hands-on management style. The observatory, which held its first meeting in June 2007, constitutes a forum for dialogue, involving doctors, managers, social partners, etc. and is tasked with monitoring quality of life in the workplace. A Group project focused on this issue is developing a method to establish a system

of local audits together with the appropriate performance indicators.

The Group's values have been reaffirmed and were the subject of a major internal communication campaign via management. Each unit has appointed an ethics coordinator, and a "workplace life" toll-free number has been set up for employees in difficulty.

#### **Diversity, a real strength**

The employment policy also aims to promote proximity and diversity in order to enrich the company's social fabric. The 2006-08 social agreement sets a target of 4% of the overall total for the recruitment of disabled employees. Distribution (ERDF as of January 1, 2008) made a particularly strong contribution in 2007 with 4.5%.

A new agreement concluded on December 21 reflects the shared determination to promote diversity and professional gender equality at all levels of the company. The first agreement had helped reduce the average disparity between men and women's salaries from 4.7% to 1.6% between 2002 and 2006. The new agreement also covers access to training and the work-life balance.

**Business Customers of the Customer Branch France: 33% of management committee members are women**

**In Hungary, Demasz accredited as an employer for the disabled**

#### **Promoting workplace dialogue**

##### **CSR: positive results and extension**

The results for the first two years of the Corporate Social Responsibility agreement (CSR) show that, within very different contexts, the Group companies have fully respected the commitments.

In 2007, the signatories extended this agreement for a further year. Employee dialogue has been conducted in all the companies to identify the local initiatives to be prioritized.

##### **New employee representative bodies**

Pursuant to company law, EDF has created a Corporate Works Council (*Comité central d'entreprise* - CCE) and Works Councils (*Comités d'établissement* - CE), to replace its former structures. Agreements were concluded with the social partners on the organization of professional elections. These were held at the end of 2007, within the period foreseen by the agreement with the electricity and gas branch (IEG). Negotiations are continuing on the exercise of union law, the composition and functioning laws of the Secondary Personnel

Commissions and the establishment of the Corporate Works Council.

##### **Reform of the special pension scheme**

Pursuant to the French government's decision to harmonize the special pension schemes with the civil service pension scheme, negotiation began with the social partners in the electricity and gas industry workers branch (IEG) during the first quarter of 2007.

Significant information resources were put at the disposal of employees: individual simulation tools, documentation on the expected changes to the special electricity and gas sector scheme, information meetings, etc.



MÉDIATHÈQUE EDF - PHILIPPE GROILLIER

The EDF employment policy aims to promote diversity in order to enrich the company's social fabric. The new 2007 agreement reflects the shared determination to promote professional gender equality at all levels of the Group.

# Research & Development: **support** and **anticipation**

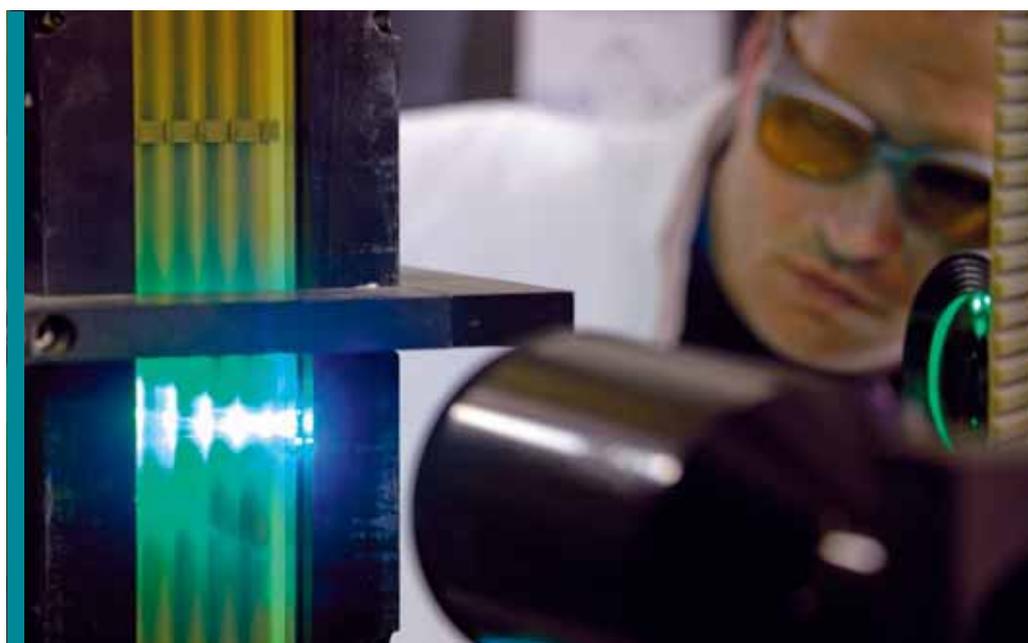
→ The EDF Group is preparing for the future and investing in innovation. The R&D Division is a real asset for EDF, working to serve customers and the operating activities alike. It is contributing to overall performance and preparing technological breakthroughs.

**Partnership  
with the Energy  
Research  
Institute  
of India (TERI),  
headed by  
Rajendra K. Pachauri,  
Nobel Prize laureate  
and IPCC Chairman**

## **Boosting overall Group performance**

The R&D Division helps boost the performances of the Group's businesses through contracts with the different branches and divisions for technology watch, studies, expertise and development. R&D is in a good position to organize the transfer of methods and tools from one business to another and to encourage Group entities to set up joint projects if their needs are similar. A Group R&D Committee was set up by EDF Energy, EnBW and Edison, with initial exchanges focusing on energy eco-efficiency. EDF R&D has some 20 projects underway

with EDF Energy. In 2007, the Division helped adapt the progress contracts developed for French companies to large customers in the UK based on audits of their energy consumption. It is also developing software to help EDF Energy counselors market energy efficient solutions to residential customers by telephone. Cooperation with EnBW is built around EIFER, the joint laboratory between EDF R&D and the University of Karlsruhe, and projects relating to distributed energy, geothermal, biomass and sustainable urban development. A first project portfolio was also set up



The R&D teams are developing tools to make generation facilities more efficient. Here, laser measurement of water through-flow speeds inside nuclear assemblies.

## 2007 R&D EXPENDITURE



\* Excluding Edison and excluding Dalkia.



The Photovoltaic Energy Research and Development Institute (*Institut de recherche et de développement sur l'énergie photovoltaïque – IRDEP*) at the EDF R&D facility in Chatou. Work is being done with thin-film photovoltaic modules to lift the conversion rate from 20% currently to more than 50%.

## 800 development projects designed to serve operating teams

with Edison, focusing in particular on fuel cells and solar energy.

### Preparing for the future

EDF R&D defined 12 new Challenges for 2007-2009, based on the Group's five strategic priorities. Several hundred researchers and numerous partners in France and abroad are working on research programs designed to pave the way for future growth. Of the different areas they address, several relate directly to environmental protection: renewable energy, rechargeable hybrid vehicles, new services, energy eco-efficiency end-uses in buildings and industry, and local energy policy. EDF R&D also helped the Group prepare its contribution to the French national conference on the environment (*Grenelle de l'environnement*) in 2007.

The IBM supercomputer delivered in 2007, a major investment for the Group, will position EDF among the world leaders in terms of numerical simulation. The Group ranks first in the worldwide industry in terms of scientific computation.

### Excellence and cooperation

EDF R&D is cultivating its areas of excellence, including in materials and hydraulics.

In 2007, it set up the Materials Ageing Institute (MAI), an international research center for the durability of materials, at the les Renardières site.

At the same time, it is optimizing its own performance by forging partnerships with universities and research centers both in France and abroad, especially via joint laboratories. For instance, in 2007, EDF R&D set up its eleventh joint laboratory with *Ecole nationale des ponts et chaussées* and the *Centre d'études techniques maritimes et fluviales* (Institute for Maritime and Waterway Studies). The new lab is focusing on fluid mechanics as applied to hydraulics and the environment.

It also set up ECLEER, the European Center and Laboratories for Energy Efficiency Research on construction and industry, at the les Renardières site, with support from Edison. Its leading partners are *Ecole polytechnique fédérale de Lausanne* and *Ecole des mines de Paris*.

With EDF Energy, R&D helped create the Energy Technologies Institute at Loughborough. This public-private partnership will play a key role in reviving research on low-carbon technologies in Great Britain.



**1,950** people of which one third are women

**200** doctoral students of which half work in-house

**67** new hires of which 17 from countries other than France

**€375** million R&D budget for EDF in 2007, of which more than €100 million for environmental protection

**375** patents on innovations

**1,020** property rights in France and abroad

### → TWO MAJOR LONG-TERM PARTNERSHIPS WITH

The French Atomic Energy Commission (*Commissariat à l'Énergie Atomique – CEA*), via a tripartite agreement with EDF and Areva

The Electric Power Research Institute, which handles R&D for American utilities. EDF is its leading foreign partner, notably for studying materials ageing and smart grids.

# Social and Environmental Responsibility

- In addition to developing competitive, low-carbon generation technologies and energy efficiency solutions, the EDF Group strategy focuses on improving its performance with regard to the social and environmental aspects of sustainable development <sup>1</sup>.

**All Group sites worldwide certified ISO 9001 and ISO 14001**

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## **Committed to protecting the Environment**

### **Through investment...**

The EDF Group is striving to minimize the environmental footprint of its electricity generation, transmission and distribution facilities. As a whole, EDF's CO<sub>2</sub> emissions per kWh produced are three times lower than the European average. In France, 95% of generation is completely CO<sub>2</sub> free. During the French national conference on the environment (Grenelle de l'environnement) in 2007, EDF France set a goal of reducing its CO<sub>2</sub> emissions by more than 20% between now and 2020. EDF Energy committed to reduce the carbon intensity of its generation activities in the UK by 60% over the same period. The Group is implementing a far-reaching denitrification program at its fossil-fired units, targeting Le Havre 4 and Cordemais 5 late in 2007 and in 2008, Cordemais 4, Vazzio

(Corsica), Bellefontaine and soon Pointe des Carrières in Martinique. After le Havre 4 and Cordemais 5 and 6 at the end of the 1990s in France, it is also installing desulphurization units in the UK at West Burton and Cottam, in Poland at Rybnik, and in China, at Shiheng.

### **... and through concrete action**

In France, the level of liquid radioactive waste (excluding tritium, carbon 14 and NI-63) produced by the nuclear plants remains well below the regulatory limit. As regards the distribution network, ERDF exceeds the burial requirements set forth in the Public Service Agreement for 2007, with 94% of new HV lines laid underground and 65% of new LV lines installed using underground or discreet technology. ERDF is continuing to bury existing lines and eliminate polluted PCB transformers.

- **Golfech the first nuclear power plant in Europe to obtain EFQM certification for Quality Management**



## Solidarity a core part of action strategy

### Formalizing commitments to society

The EDF Group's commitments to society are outlined in the Public Service Agreement signed with the French State in 2005 and in the Corporate Social Responsibility (CSR) agreement entered into with stakeholders for all Group companies.

In keeping with the CSR Agreement, the contractual terms of the sale of the Group's plants in Mexico included an agreement with plant employees and ensured that it be implemented by the buyer. Along the same lines, EDF works with the toughest safety standards, refusing to consider serious accidents as inevitable. Strict measures were thus adopted following two fatal accidents in 2006 at Kogeneracja, in Poland, and a safety committee has been set up at Nam Theun in Laos. The CSR agreement is reflected in the performance reviews of all Group companies.

### Acting locally

EDF is fully aware that its stakeholders are a diverse group including vulnerable customers, young people, job seekers, and persons with disabilities.

EDF is helping assure that these more vulnerable customers have access to essential services through adapted solutions.

It is also facilitating job placement for young people and providing emergency assistance to those confronted with critical situations or crises.

All Group companies are acting locally by supporting projects that improve quality of life and create jobs. They are also contributing their expertise through energy eco-efficiency advice for local renovation programs; EDF Energy's involvement in the Warm Zones in England is but one example. In addition, the companies are promoting education on energy issues.

### Promoting access to energy

EDF is implementing energy access programs in developing countries, particularly Africa. Its goal is to work with local partners to set up decentralized service companies that are handed over once viability is assured. One example was the sale in 2007 of EDF's stake in South Africa's PNES, after it brought electricity to a township near Cape Town. EDF is involved in rural electrification programs in that country as well as in Mali, Morocco and Madagascar.

1. See 2007 Sustainable Development Report
2. PolyChloroBiphenyl.

## RESPONSIBILITY

Helping vulnerable customers is a priority for the Group, and part of the Public Service Agreement in France. The Customer Branch has taken over responsibility for these issues since the distribution activity was unbundled <sup>3</sup>.

EDF Energy is powering ahead with its Energy Assist social tariff in the UK. In 2007, electricity and gas industry regulator Ofgem <sup>4</sup> named EDF Energy the supplier with the highest level of commitment to vulnerable customers.

## LAOS

770 families housed in a new village on the Nam Theun 2 dam site in 2007 (Source projet Nam Theun).

## CHINA

Figlec funding the reconstruction of a school based on environmental and energy conservation criteria.

## AWARDS

The Sustainable Development Awards generated a high level of enthusiasm and a very large number of initiatives from Group companies, including BERT of Hungary, which submitted a project for optimizing water consumption at the Újpest plant, and Edison, which proposed a plan to install photovoltaic panels at its headquarters in Milan.

<sup>3</sup>. See section on sales and marketing in France.

<sup>4</sup>. Office of Gas and Electricity Market.



**Our goal is not to adopt one approach for France and another for the rest of the world. We aim to apply the same high standards and targets of excellence for social and environmental performance everywhere. The Group is therefore called upon to make a distinct contribution to the countries in which it operates.”**

**Dominique Lagarde**, Senior Executive Vice President, Strategy and Coordination

# EUROPEAN BUSINESSES



# Market

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➤ **The EDF Group generates 98% of its sales** in Europe, where it is established on the four largest energy markets: France, the UK, Germany and Italy. Electricity and gas markets across the European Union were fully deregulated in 2007. The Group was prepared for this market opening and had made the appropriate changes. With concern mounting in Europe over energy supply and climate change, EDF's industrial solutions, adapted to each country but all geared to low-carbon generation and energy eco-efficiency, are more attractive than ever.



# Background and changes in Europe



In Europe, increasingly concerned about issues of supply security and climate change, the EDF Group's solutions, tailored to each country, but all focused on low-carbon generation and energy eco-efficiency offers, are of the utmost relevance.

**+ 600 GW  
of new capacity  
between 2005  
and 2030**

—

### European energy policy and the choices ahead

#### Growing awareness across the board

The European Council of Ministers expressed a desire to tackle climate change in March 2007, and its stance was echoed by the very proactive position adopted by the European Union at the Bali Earth Summit. The Council subsequently decided to include nuclear power as a possible part of the solution, alongside energy eco-efficiency and renewable energies.

Nuclear power seems even more crucial today in that Europe will be increasingly reliant upon imported fossil fuels, since it cannot generate enough renewable energy to satisfy both increasing demand and the required decrease in the use of fossil fuels.

#### The determining effect on the future of today's decisions

The European electric system was in a situation of excess capacity for a time but is now showing signs of weakness. In addition, tougher environmental regulations have made even more plants obsolete. Of the 600 to 700 GW of new capacity the European Commission wants brought into service between 2005 and 2030<sup>1</sup>, 300 GW will go to covering growing needs and 300 GW to replace facilities at the end of their useful life. These plans are an opportunity to adopt low-pollution, low-carbon and competitive generation technologies.

### Ongoing differences of opinion

Positions with regard to nuclear power are thus becoming less categorical. Enel, Italy's leading electricity company, has agreed to acquire a 12.5% stake in and help finance the Flamanville 3 EPR project.

The British government has supported the idea of the country's return to nuclear, but the debate is still ongoing in Germany: EnBW did not receive authorization to extend the lifetime of a nuclear power plant, and it was phased out as planned.

### Clear commitments from the EDF Group

#### Keeping the focus on climate change

The Group is seeking first and foremost to develop generation methods that produce little or no CO<sub>2</sub>, adapting its strategy to local political policy. The EPR at Flamanville is one example. In the UK, EDF Energy will build a CCGT to keep up with demand in the short term and, further out, will be positioned to take part in the country's nuclear revival.

Edison's investment policy in Italy has given it a relatively clean generation profile, with highly efficient CCGT plants. In Germany, EnBW is looking into building a high-efficiency supercritical coal boiler. At the same time, all Group companies are investing in renewable energies and developing energy eco-efficiency services.

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## ELECTRICITY PRICES IN EUROPE IN 2007

FORWARD PRICES (2007 Platts average assessment of Calendar 2008 Baseload)

FRANCE	€54.4 /MWh
GERMANY	€55.9 /MWh
UNITED KINGDOM*	€57 /MWh
SPAIN	€51.3 /MWh
NETHERLANDS	€60.4 /MWh

\* (2007 Platts average assessment of April Annual 2007 and 2008 Baseload).

### SPOT PRICES IN ITALY

(2007 GME average baseload day-ahead price)

ITALY	€71.6 /MWh
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## An open but fragmented market

### 2007: full market opening

Electricity markets were fully opened across the European Union in 2007, and rules were applied to unbundle sales and marketing activities from network operations in order to guarantee equal access to networks.

A number of Group entities were affected by these changes, chief among them EDF France, which set up distribution subsidiary ERDF on January 1, 2008, just as it had created RTE before (independently managed since 2000 and a subsidiary since 2005). Similar changes were made at SSE in Slovakia and Demasz in Hungary. The Group was able to benefit during this process from EDF Energy's experience with the unbundling process over the last decade.

### The need to improve fluidity

Market opening has not automatically created a single market. The European electricity industry is still fragmented. Some regions remain insular, including the Iberian Peninsula and Italy, where interconnections are insufficient. A market is nonetheless taking shape between Germany, France,

Benelux and Switzerland but, even here, exchanges are limited by inadequate interconnection.

### EDF policy: focusing on Europe

The EDF Group is delivering multi-country energy solutions through a coordinated sales and marketing network covering 11 countries (France, the UK, Germany, Belgium, Spain, Italy, Austria, Slovakia, Hungary, Poland and the Czech Republic). Slovakian affiliate SSE is also working with major accounts like PSA and Metro in their catchment area.

The Group also entered into the carbon market late in 2006 by setting up a Carbon Fund to pool capacity to acquire emissions credits between EDF, EDF Energy, Edison and EnBW. Managed by EDF Trading, the Carbon Fund has a buying capacity of close to €300 million, making it one of the leading players in the emissions allowance market. The fund earned EDF Trading a Gold Award for Excellence in Emissions Markets in the 2007 Energy Business Awards.

1. DGTREN study – trends to 2030 – update 2005.

## WHOLESALE ELECTRICITY PRICES

Spot prices (Average previous day price – baseload and peakload – for same-day delivery)

France<sup>1</sup>  
**€40.9 /MWh** baseload  
**€58.5 /MWh** peakload

United Kingdom<sup>2</sup>  
**€42.2 /MWh** baseload  
**€55.9 /MWh** peakload

Germany<sup>3</sup>  
**€38 /MWh** baseload  
**€56.2 /MWh** peakload

1. Powernext.
2. Platts OTC.
3. EEX.

## OPTIMIZATION AND TRADING

To secure its energy supply, the Group is working with EDF Trading to organize cooperation between the optimization and trading entities of EDF France, EnBW in Germany, Edison in Italy, EDF Energy in the UK and Everen in Poland.

## KEY ACCOUNTS

One graphic identity now used by the entire sales and marketing network for large accounts in Europe, bringing together EDF Energy, Edison, EnBW and EDF France.



MÉDIATHÈQUE EDF – RICHARD SCHROEDER



It was in Europe that the urgency of sharply reducing greenhouse gas emissions was first recognized, and today investment is needed to keep up with demand. We are convinced that energy eco-efficiency, renewable energies and nuclear power must necessarily be part of the solution. The EDF Group is ready to make all of its expertise available and mobilize its people, technologies and powerful industrial resources.”

**Bruno Lescoeur**, Senior Executive Vice President, International Industrial and Public Affairs



## KEY FIGURES

Sales:

**€32.2 billion**

**65.7%**

Group EBITDA  
contribution

Customers:

**28.3 million\***

(of which approximately  
120,000 for gas)

Employees:

**105,322\*\***

Installed capacity:

**98 GWe\***

Generation:

**482.9 TWh\***

\* Including Corsica  
and overseas Departments.

\*\* The EDF number of employees  
in France include EDF and RTE-EDF  
Transport employees as well as  
employees not belonging to the  
electricity and gas industry  
workers branch (IEG).



# FRANCE

## Groundwork laid for a new competitive environment

- EDF implemented major changes in France ahead of full market opening in 2007. The sales and marketing and distribution activities were unbundled, and the ERDF distribution subsidiary has been operational since January 1, 2008.

### Electricity: divergent trends

Mild weather in winter, cool temperatures in the summer and a sharp drop in the average price per tonne of CO<sub>2</sub> dragged spot prices lower in France and neighboring countries. However, starting in October, spot prices in France shot upward owing to higher coal and heating oil prices and temporary imbalances between supply and demand. There were several cold spells late in the year, when generation was limited by low rainfall in France, the absence of wind in Germany and the unavailability of several plants. Base load prices peaked at above €150/MWh, and these fluctuations were reflected in futures prices.

### The integrated model proving optimum

EDF France took full advantage of the integration of its generation and sales and marketing activities. The Downstream Optimization and Trading Division specializes in matching upstream electricity and gas resources (generation and supply) with selling channels (sales to customers and wholesale markets and capacity auctions). It seeks, through its trading activities, to maximize gross margin across the board by controlling the risks stemming from fluctuations in customer consumption and generation and market variables. On a longer-term view, it suggests adaptations of the structure of the upstream and downstream portfolios based on forecast market trends. EDF Trading, a wholly-owned EDF subsidiary, provides support for transactions on wholesale electricity, gas, emission allowance and fossil fuel markets.

### Spot prices in France

**Average €40.9/MWh for baseload**

(vs. €49.3/MWh in 2006)

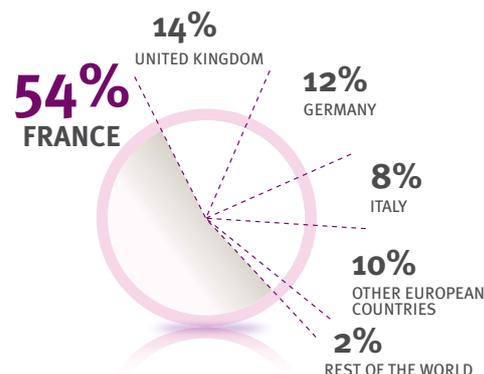
**Average €58.5/MWh for peakload**

(vs. €69.8/MWh in 2006)

MÉDIATHÈQUE EDF - FRÉDÉRIC STUCIN



### BREAKDOWN OF EDF GROUP SALES



FRANCE



# Sales and marketing in France: the year of **full market opening**



In response to growing environmental concerns, EDF has focused its sales and marketing policy on energy eco-efficiency. The *Bleu Ciel d'EDF*<sup>®</sup> brand was launched for residential customers during the year, and the investment program has been stepped up further.

Introduced in September 2007, the *Bleu Ciel d'EDF*<sup>®</sup> brand is gathering momentum: more well-being and savings thanks to energy eco-efficiency



## Renewing the residential offers

### Successful market opening

For the full opening of the energy markets on July 1, 2007, EDF set two objectives: to enable any customer wishing to change supplier to do so easily and to guarantee all those who wanted to remain on the tariff the same quality of service. The objectives were fully achieved: customers wishing to do so have changed supplier without any difficulty and customer satisfaction did not decline. The cooperation between distribution and sales and marketing during this critical period was a key factor in the successful transition, involving more than 28.4 million points of delivery. Sales and marketing was completely transformed: information and telephone systems, product ranges, customer service centers.

**26.9 million**  
residential and  
professional customers

**15 million visits**  
per year to the  
residential website [edf.fr](http://edf.fr)

**Gas supply to  
60,000 residential  
customers**  
(end December 2007)

# Bleu Ciel d'EDF®:

aided recall rate of 42% at the end of 2007<sup>1</sup>

## MARKET OPENING IN FRANCE FOR ELECTRICITY SALES AND MARKETING

**6,000** customer service advisors reachable 24/7 by telephone

**68** customer service centers

**191** shops

**17,000** Cash Counters in partnership with the French post office

**6,000** Bleu Ciel d'EDF® partners (insulation, renovation, electricity, plumbing)

## TARIFFS FOR RESIDENTIAL CUSTOMERS

Pursuant to the Public Service Agreement, residential tariffs are increasing by no more than inflation. They rose by 1.1% in August 2007.



MÉDIATHÈQUE EDF - RICHARD SCHROEDER

### Services to make life easier

2007 saw the launch of a number of services: *Suivi Conso* for personalized advice on managing energy consumption and *Assistance Dépannage Électricité/Électricité + Plomberie* for repair assistance. The year's other new developments: payment by SMS, electronic billing and the interactive telephone-based vocal server *Mon Compte sur Serveur Vocal* to communicate meter readings, consult account balances and pay bills by bank card. Thirteen percent of calls are already handled by this service. These services are in addition to those

organized around a customer's key life moments, moving house, improving comfort in the home, building a home, renovation of electrical equipment, etc.

### A new sales and marketing momentum based on energy eco-efficiency

In September, following the opening of the residential market, EDF launched its sales and marketing brand, *Bleu Ciel d'EDF®*, which introduced a new dynamic: more ecology, more savings and more well-being

1. Source: TNS Sofres.

## THE OPENING OF THE FRENCH MARKET FOR SALES AND MARKETING OCCURRED IN THE FOLLOWING STAGES



\*Local distribution companies.

**We are experiencing a Copernican revolution. Customers are now empowered to make their own energy choices. They are even becoming energy producers. It is important for an energy company like EDF to participate in this new momentum.”**

Jean-Pierre Benqué, Senior Executive Vice President, Customers.

# FRANCE



MÉDIATHÈQUE EDF – JEAN-LIONEL DIAS

Installation of floor heating system linked to a heat pump. EDF is now delivering comprehensive solutions including insulation and heating systems based on renewable energies.

**Consumption record:**  
**88,960 MW**  
**in France on**  
**17 December**  
**at 7:00 p.m.**

RTE estimate



through energy eco-efficiency offers within a new relationship putting customers in charge of their consumption and even their energy generation. As of 2008, *Bleu Ciel d'EDF*® will replace the *Vivrélec*® brand. The residential offer has now been enriched with a dual offer adding natural gas to electricity, an off-tariff electricity offer *Mon contrat élec*, and an *Équilibre*® offer proposing an audit aimed at preserving the environment while reducing customers' energy bills.

Launched in November, the *Bleu Ciel d'EDF Énergie Solaire*® advisory service includes three photovoltaic offers, *Énergie Solaire Clé en Main*, *Énergie Solaire Production Garantie*, and *Énergie Solaire Financement Adapté*, developed and implemented by *EDF Énergies Réparties*.

The range of offers aimed at home heating

renovation is growing and EDF is developing turnkey energy eco-efficiency renovation services. Based on a home energy and carbon performance audit, these services offer global renovation solutions integrating insulation and heating systems based on renewable solutions including heat pumps, individual solar water heaters, and wood-fired boilers.

### Helping vulnerable customers

Having assumed responsibility for the management of vulnerable customers, the Customer Branch created a National Consumer Service and specially-trained regional teams, available 24/7 on a national toll-free number (0800 650 309). Support for vulnerable customers now includes the *Maintien d'énergie* service, which ensures a minimal service of 3,000 W in the event

## ... Vulnerable customers

**630,000 clients**  
customers have benefited  
from EDF's *Tarif de Première Nécessité*

**300 advisors**  
across the customer  
service centers

of payment arrears, a basic necessity tariff (*Tarif de Première Nécessité*) and the contribution to the housing solidarity fund (*Fonds de solidarité logements départementaux*) which pays a portion of the electricity bill.

### Professionals: rapid, efficient solutions

EDF has developed its *EDF Pro*® range, which facilitates the lives of its professional customers. The *Essentiel*, *Présence* and *Souplesse* offers have been replaced by *Électricité Pro* and *Gaz Naturel*, together with services such as a two-hour repair service (*Assistance dépannage 2 heures*) which is proving very successful. EDF also markets a *kWh Équilibre*® offer which supplies electricity coming, partly or wholly, from renewable energies. *EDF Pro* and its *Climsure* partnership network offer an energy-efficient air conditioning solution which guarantees maximum peace of mind: a free audit, advice on managing energy consumption, a five-year equipment guarantee, a maintenance contract as part of the offer and tailored financing.

### Partnering businesses

#### Energy eco-efficiency to the fore

In order to meet the expectations of businesses, EDF is developing a range of energy eco-efficiency services: equipment audits, installation and financing of energy-efficient equipment using mostly renewables, maintenance and operating services.

With the *Équilibre*® range, customers can purchase kWhs from renewable energy sources while providing support for the Cisel photovoltaic research program. They are supported in managing their energy usage and environmental impact by advisory and management services such as *Adviso*®, *di@lege*® and *Panorama*® (consumption monitoring and control) and audits such as *Diagnostic Optimia*® and *Contrat de progrès*® (consumption management).

#### Quality of service and customer satisfaction

Customer satisfaction is at the heart of EDF's sales and marketing strategy. Some strengths are particularly appreciated such

### SALES AND MARKETING

**175,000** *Premier Niveau Rénovation* renovation advisory services

**12,000** *Objectif Travaux* services

**336,500** *Vivrélec*® loans for new build or renovation

**100,700** Electricity Repair/Electricity + Plumbing Repair Services

**80,000** *Assurélec*® services

**46,500** *Suivi Conso* services



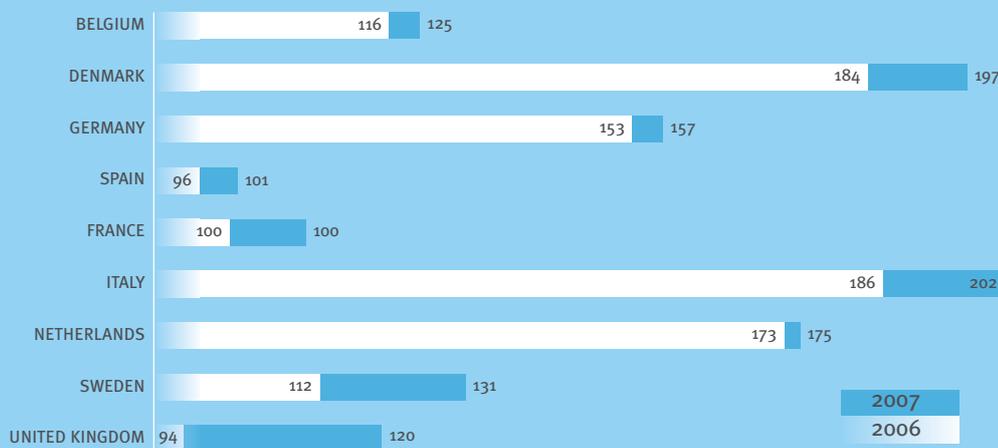
### HIGH TEMPERATURE HEAT PUMPS

In 2007, the new heat pump developed by EDF R&D allowed this new technology to take a significant step forward. It can heat an old house without any back-up energy even on the coldest day, while producing hot water. In a 160 m<sup>2</sup> house, substituting the heat pump for a fossil-fired boiler and without any modification in the central heating system, a high temperature heat pump can halve the heating bill and divide CO<sub>2</sub> emissions by five. It is now moving into the industrial phase and will become part of EDF's distributed renewables offer.

### COMPETITION

In order to provide resellers who compete with EDF the maximum level of security within a context of high market prices, in December 2007 the French Competition Authorities accepted EDF's commitment to give them access to a volume of base load energy. This supply will gradually increase in terms of power and price, to cover, as of 2013, the EPR development cost (€46 MWh 2005 euros).

### ELECTRICITY – DOMESTIC CONSUMERS – HALF-YEARLY PRICES



Source: Eurostat.

## Professional customers

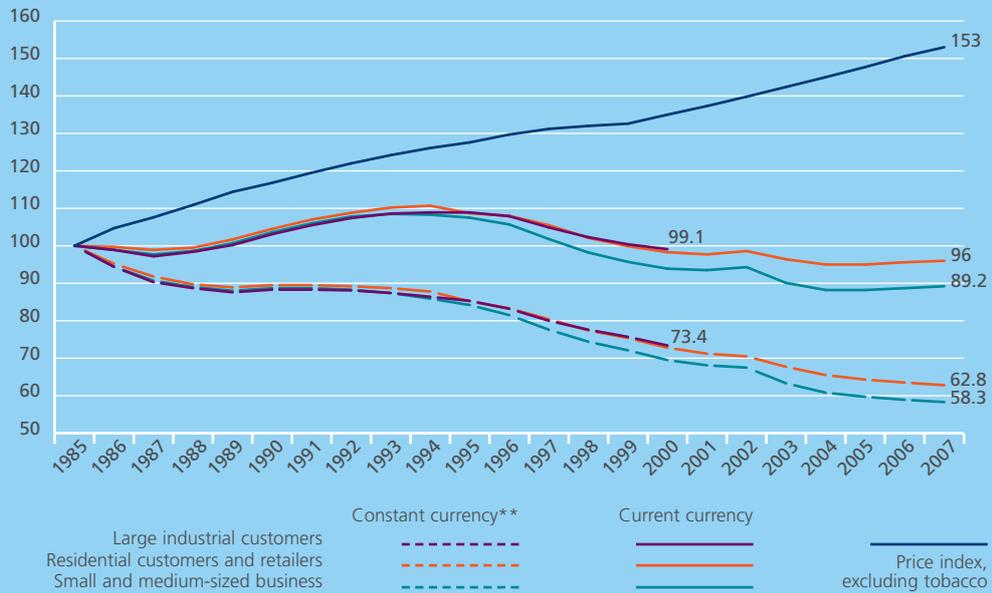
**20,000**  
*Électricité Pro*  
offers

**47,000**  
2-hour repair services

**55,000**  
contracts  
Dual electricity  
and gas offer



**REGULATED TARIFFS: ANNUAL TREND IN PRICES BEFORE TAX EXCLUDING CONTRIBUTION TO ELECTRICITY PUBLIC SERVICE FUND (CSPE)** (price index 100 in 1985)



\*CSPE: Contribution to Electricity Public Service Fund. \*\*Adjusted for inflation. Source: EDF.

as the warm welcome, the professionalism of EDF contacts or the day-to-day handling of requests. EDF is working on improving the quality of customer service in terms of billing and the time taken to handle complaints. The Business Customers Division is working to obtain ISO 14001 environmental certification.

**Partnership for electricity-intensive customers and transitional schemes for industrial companies**

Before the increase in market prices between 2000 and 2004, the French government instituted, for industrial

companies having left the tariff, the opportunity to opt for a transitional regulated tariff for market adjustment (*Tarif transitoire d'ajustement du marché – TarTAM*), for a non-renewable two-year period. Its level may be no more than 25% above the regulated tariff applicable at a site with a similar amount of consumption. The customers had to ask EDF for this tariff before July 1, 2007.

With the very large users regrouped in the Exeltium consortium, EDF is committed to a long-term industrial and sales and marketing partnership. The objective: to enable these customers to benefit from

**Business customers**

**200,000 clients**

**223.5 TWh<sup>1</sup>**  
electricity sales in 2007

**16.7 TWh<sup>2</sup>**  
natural gas sales

1. Excluding Tarif Bleu sales, handled by the Residential and small Business Customers Division for the Business Customers Division.

2. Including sales to local authorities and low-income housing agencies.

visibility on the cost of their electricity supply in return for sharing the risks involved in investing in EDF's generation assets. Its implementation is subject to no objection from the European authorities.

### Support for local authorities

#### The proximity of an energy eco-efficiency partner

With the support of its subsidiaries, affiliates and partners, EDF is deploying an array of services, audits, advisory and consumption management tools to provide assistance to local authorities and low-income housing agencies in their energy eco-efficiency projects. It puts at their disposal multiple technical solutions based on renewable energies: solar, thermal, photovoltaic, geothermal, wood-burning and heat pumps. EDF advisors help them to improve the performance of their asset portfolio.

The enthusiasm shown by low-income housing agencies for the *Montant de Charges* offer, which includes a guarantee of results, demonstrates the relevance of such approaches, which also generate energy saving certificates.

#### Diversified operating systems

Numerous local authorities have installed efficient equipment with EDF. Saint-Etienne chose a photovoltaic installation for its Geoffroy Guichard stadium, while Chaville opted for the same type of equipment for its cultural center, designed as a showcase to raise clean energy awareness amongst inhabitants. The Urban Community of Pays d'Aubagne et de l'Etoile chose biogas to generate electricity resold to EDF. In Soultz, geothermal is providing comfort and energy efficiency in retirement homes. The same energy source heats the leisure center in the Community of Communes in Dunois.

Photovoltaic panels at the Geoffroy Guichard Stadium, Saint-Étienne.

MÉDIATHÈQUE EDF - WILLIAM BEAUCARDET



### PRODUCTIVITY

In order to increase customer satisfaction and improve productivity, EDF has launched the *Clipper* project which aims to streamline certain processes: the management system, contract management, the bundling and deployment of electricity and gas offers and relations with the distributor, for example.

### PARTNERSHIP

The *Puissance Excelis* offer developed with Schneider for the installation, financing and maintenance of transforming stations has found its market with 134 contracts negotiated.



### ENERGY ECO-EFFICIENCY

In public buildings and social housing

In order to reduce energy consumption and CO<sub>2</sub> emissions, EDF R&D is developing:

- Tools to target and prioritize action within a building,
  - Efficient technologies for housing and the integration of renewable energies,
  - Numerical simulations to evaluate the savings and overall cost of strategies.
- These services aim to promote the emergence of "total cost-oriented" business models. A number of studies with local authorities are underway.

## Local authorities

**80,000**

local authorities and low-income housing agencies in mainland France

Quality of service: **87%**  
of customers satisfied in 2007<sup>3</sup>

Creation of  
**an internet site dedicated**

3. Source: TNS-Sofres.



# Generation in France



In France<sup>1</sup>, EDF produced 482.9 TWh, including 86.6% from nuclear facilities. To respond to growing demand and peak load increase, industrial investment in all generation business has increased.



MÉDIATHÈQUE EDF - JEAN-LIONEL DIAS

## An efficient and diversified generation fleet

EDF utilizes its power plants giving priority to those that carry the lowest variable costs. Run-of-river hydro plants are called upon for base load generation and nuclear plants for base load and semi-base load. Dam hydro and fossil-fired units are relied upon for semi-base load and peak production.

## The 58 nuclear reactors

The 58 nuclear reactors account for 86.6% of EDF's generation in France. Availability was lower than in 2006 (80.2% versus 83.6%) owing to a generic failure, with no impact on safety, affecting 15 steam generators at the 900 MW and 1,300 MW units. A chemical treatment was developed in cooperation with the French Nuclear Safety Authority (*Autorité de sûreté nucléaire* - ASN) and successfully implemented at one plant during the first half of 2007, and subsequently at three other sites. EDF's goal for the medium term is to achieve 85% availability thanks to a resolution of clogging problems with the steam generators, more efficient operations and further shortening of

**95% of generation**  
in France without CO<sub>2</sub> emissions,  
due to hydro and nuclear fleet

**42.5 g CO<sub>2</sub>/kWh**  
emissions from EDF's generation plants in France  
are eight times lower than the European average  
(372 CO<sub>2</sub>/kWh – source AIE 2005)



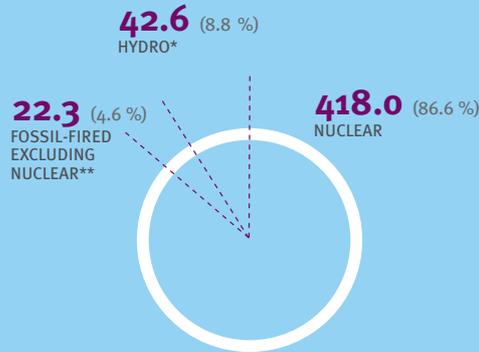
## EDF, INSTALLED CAPACITY BY AREA IN 2007 (in GWe)



\* Of which 371 MW for Corsica and overseas departments in 2007.  
 \*\* Of which 1,405 MW for Corsica and overseas departments.



## EDF, GENERATION BY AREA IN 2007 (in TWh)



\* Of which 1.4 TWh for Corsica and overseas departments.  
 \*\* Of which 4 TWh for Corsica and overseas departments.



## FRANCE

**96.2 GWe** in continental France: Europe's premier generation fleet excluding Corsica and overseas Department

**16 %** of total installed capacity of main European countries (the twenty-two members of the Union for the Co-ordination of Transmission of Electricity - UCTE)



## CHANTIER EPR

The construction of the EPR at Flamanville is being conducted under a "major project" (*Grand Chantier*) approach to facilitate the worksite's integration into the region's social and economic fabric.

A total of 1,800 candidates applied to the "Bus for Jobs" (*Bus pour l'emploi*) chartered by the Bouygues Group with EDF, the County Council of La Manche, the employment agencies ANPE (Agence Nationale pour l'Emploi) and APEC (Agence pour l'Emploi des Cadres): 215 were hired and more than 160 are being trained.

Local companies can get information about calls for tenders and progress on the project via the special website set up with the Cherbourg International Chamber of Commerce. They can also put their names on the list of local subcontractors made available to contract holders.



the duration of shutdowns for fuel reloading. In 2007, six reactors were reloaded in less than 30 days and the Dampierre 2 unit in 23 days, a record for France.

### Hydro generation

Hydro generation increased to 42.6 TWh from 40 TWh in 2006, despite unusually low rainfall. Demand response improved to 99.3% from 99.2% a year earlier. Availability fell to 90.9% from 91.7% in 2006, owing to work being done on the SuperHydro program.

### Fossil-fired units

Investments made over the last three years in the fossil-fired units (coal, gas and oil) are beginning to bear fruit. These responsive and efficient assets account for 4.6% of EDF's generation in continental France. Availability continues to improve, with an annual unavailability ratio of 11.96% in 2007 compared with a target of 13%. The oil-fired Cordemais 3 plant (700 MW) was brought back into service as planned, after being shut down for 12 years, and the new combustion turbine at Vitry (125 MW) was connected to the network. Work on the latter project mobilized 50 people over 18 months. EDF is investing in flexible and responsive plants to meet consumption peaks.

1. Including Corsica and overseas departments.



When it comes to energy and environmental challenges, our generation fleet is proof that it is possible to reconcile safety, competitiveness and climate protection. EDF's resources are gaining new momentum with the EPR at Flamanville, investments in semi-base load and peak capacity, and our recruitment and training efforts."

Bernard Dupraz, Senior Executive Vice President, Generation



## FRANCE



MEDIATHEQUE EDF - WILLIAM BEAUCARDET

Run-of-river dam at Tuillières, on the Dordogne. Part of the SuperHydro (hydro safety and performance) program involving 450 projects to renovate and modernize the hydro fleet in France.

**45%**  
of generation  
division  
employees  
to retire  
by 2015



### **Safety and radioprotection: making constant progress**

#### **Stringent controls and an industrial approach**

Maintaining the highest level of safety and security is EDF's top priority. Operators are responsible for overall evaluations in nuclear plants while the Senior Vice President, Nuclear Safety and Radioprotection conducts audits. The Nuclear Safety Authority (*Autorité de sûreté nucléaire* – ASN) also conducts 400 annual inspections. The ten-year inspections, which last about three months and require more than five years of preparation, involve complete "check-ups" and rely in part on technical innovations made possible by feedback from France and other countries. In 2007, the safety

re-inspection for the first ten-year inspections of the 1,500 MW reactors led to in-depth exchanges with the Nuclear Safety Authority. The second ten-year inspection (20 years) of the 1,300 MW unit is underway and will continue through 2014. Meanwhile, the third ten-year inspection (30 years) of the 900 MW facilities will begin in 2009 at Tricastin and Fessenheim. A first contract for studies, maintenance work and upgrades was awarded to Areva in 2007.

#### **Best international practices**

Regular international inspections encourage the sharing of best practices. Initiated by the Nuclear Safety Authority, the Osart<sup>1</sup> reviews conducted by the IAEA<sup>2</sup> produced some recommendations on operational safety. The Osart conducted at



## Five key priorities for 2007

**Operate** the Group's  
58 reactors safely and improve  
their performance

**Continue** to invest  
in the fossil-fired facilities

# 0.8 event of safety significance

(level one or higher)

per reactor on average in 2007

(1.2 per reactor in 2006)

Chinon in 2007 identified 11 best practices. Meanwhile, the Peer Reviews conducted by WANO<sup>3</sup> at EDF's request, were an opportunity to compare safety performance to best international practice. These reviews were done at the Blayais, Cruas, Fessenheim and Penly facilities in 2007.

### Radioprotection: exceeding targets

The average cumulative dose declined to 0.60 man-Sieverts per reactor per year from 0.69 man-Sieverts in 2006. The 2007 level was comparable to those recorded by nuclear operators working with the same technology in Germany, Japan and the US. Individual exposure was well below the regulatory limit of 20 mSv over 12 months: in 2007, only 20 people from EDF or sub-contractors received cumulative doses of

more than 16 mSv. More progress must still be made in managing radiation risk (119 significant events in 2007).

### Hydro safety: applying the same level of vigilance

EDF pays close attention to safety at its hydro plants, notably in regard to operations during floods and protection downstream of dams. The Group conducts information campaigns every year to build awareness among those coming into contact with the hydro sites. Infrastructure is also subjected to ten-year safety inspections. A total of 12 dams were inspected in 2007.

1. Operational Safety Review Team.
2. International Atomic Energy Agency .
3. World Association of Nuclear Operators.

### BEST PRACTICES

Challenges are being organized within the generation plants to recognize and share best practice across all businesses.

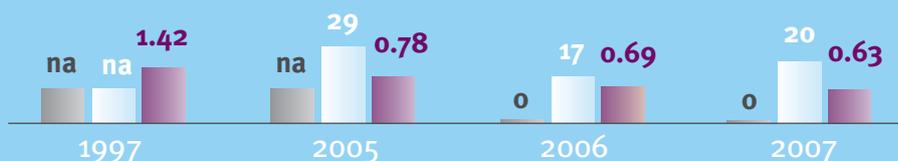
For the ninth Nuclear Operations Division Challenge, 131 innovations and best practices in terms of safety, security and radioprotection were submitted, and 18 were widely adopted in 2007.

The first edition of the Services Division Effective Practices Awards yielded 13 practices that will be spread across the Group.

### NUCLEAR PLANT LIFE

In France, the Nuclear Safety Authority must authorize nuclear plants to remain in operation every ten years, following the Ten-Year Inspection and Safety Re-inspection conducted by EDF under its supervision. A series of modifications proposed by EDF and approved by the Authority in 2006 should enable the plants to be kept active for 40 years or more. In the US, operating licenses have already been extended from 40 to 60 years for 48 of the 100 nuclear power plants.

## RADIOPROTECTION

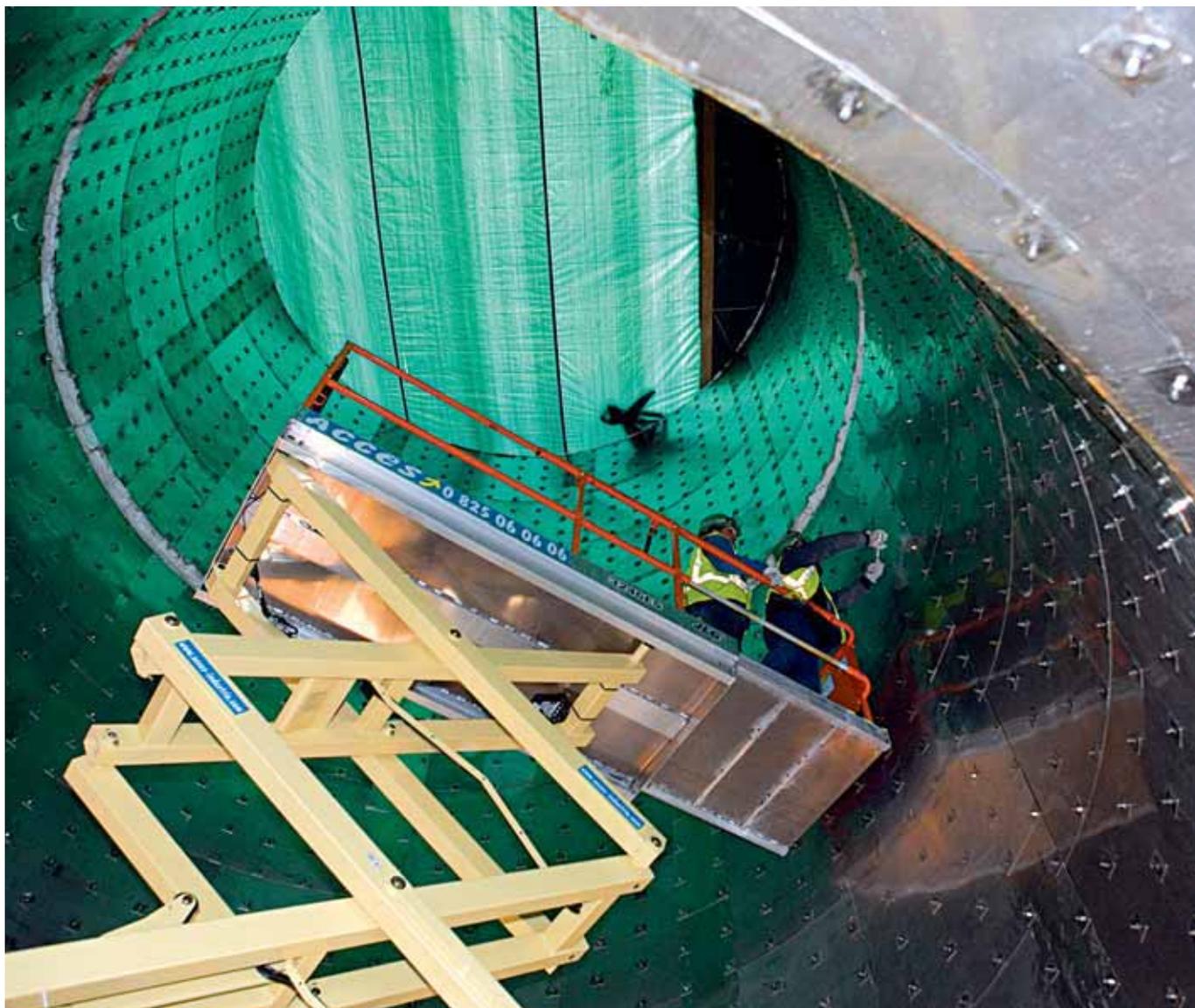


- Number of workers cumulating a dose of over 18 milliSieverts in a twelve-month period
- Number of workers cumulating a dose of over 16 milliSieverts in a twelve-month period
- Average collective dose (manSieverts/reactor)

**Meet** the objectives set for the Flamanville 3 EPR in terms of quality, deadlines and costs

**Support** EDF's international development, notably in the nuclear field

**Update** and boost skills



MÉDIATHÈQUE EDF – FLORENCE JOUBERT

Construction of three combustion turbines underway at Vaires-sur-Marne. Objective: keep up with the increase in peak demand.

**East Hydro-generation unit: the first to get triple certification: ISO 9001, ISO 14001 and OHSAS 18001**

—

**Minimizing the environmental footprint of our facilities**

EDF is reducing the environmental impact of its facilities along with waste and effluents<sup>1</sup>. The denitrification systems in place at the fossil-fired units at Havre 4 and Cordemais 5 since the end of 2007, and to be installed at Cordemais 4 in 2008, reduce nitrogen oxide emissions by 80%. The flue gas desulphurization systems already installed at these units are 90% efficient. In addition, the use of very low sulfur-content fuel (0.55%), including at Cordemais 3, is further limiting the Group's environmental impact. Thanks to tight at-source control and management of effluent production at

the nuclear plants, liquid radioactive waste (excluding tritium, carbon 14 and NI-63) was kept well below the regulatory limit at 0.3 GBq per reactor and per year. Progress was also made on chemical waste: where hydrazine is concerned, just a few kg were emitted per reactor and per year, and for boric acid, emissions have fallen by 30% since 2004.

Radioactive waste is managed with extreme caution and in complete safety before being shipped to Andra<sup>2</sup> sites for storage. EDF is working hard to reduce production at the source, efforts that will also yield economic benefits.



## PROGRAM: ACHIEVING EXEMPLARY INTERNATIONAL STANDARDS

EDF has committed to a €600 million “housekeeping” program over five years to bring the nuclear plants up to the best international standards in terms of paint, lighting, resistance to seaside corrosion, etc. The program got underway in 2007 at Civaux, Golfech and Tricastin.



## FACTORING IN THE HUMAN ASPECTS OF TECHNICAL PROJECTS

Programs designed to upgrade power plants must necessarily take into account the overall technical, organizational and work environment for people. This is why EDF R&D has developed an approach for integrating these factors into planned changes to the nuclear fleet. Tested in some 30 projects scheduled ahead of the third ten-year inspection of the 900 MW units, the approach has proven its value. The plan was submitted to the Nuclear Safety Authority in June of 2007 and is gradually being applied at different sites.

## GENERATION IV SODIUM-COOLED FAST REACTORS

The joint R&D program launched by the French Atomic Energy Commission (CEA – *Commissariat à l’Energie Atomique*), EDF and Areva aims to propose, by 2012, the main options for developing a Gen IV sodium-cooled fast reactor and beginning construction on a prototype that could be put into service after 2020. Research into fast nucleon reactors reflects the principles adopted by the Gen IV International Forum (GIF). Member countries signed a first agreement in 2007: Euratom, France, Japan, the US and Korea. China recently became a GIF member.

## Ramping up investment

### Boosting generation capacity in all segments

EDF maintained its investment program in 2007 to keep up with increases in electricity needs and peak demand. The investments are spread across all business lines: nuclear, with the EPR at Flamanville 3, hydro with the construction of the 54 MW Rizzanese dam in Corsica, and fossil-fired with the re-commissioning of four oil-fired units (Porcheville B1 and B2, Cordemais and Aramon, total capacity of 2,540 MW) and the construction of new combustion turbines (550 MW) at Vitry and Vaires.

EDF also invested during the year in semi-base load and peak load capacity with CCGTs at Blénod and Martigues and combustion turbines (555 MW) at Vaires-sur-Marne and Montereau (see section on investing in industrial assets in France), for a combined capacity of 1,925 MW.

### Sustainable improvements in economic performance and safety

Other investments are geared to improving efficiency and safety at existing plants. Between 2007 and 2011, EDF will invest nearly €560 million in the SuPerHydro program (Safety, Performance, Hydro) approved late in 2006 and involving 450 renovation and overhaul projects. In 2007, priority was given to preparing for the re-commissioning of major facilities that have been shut down, including Tuilières and Pragnères. Among the large projects conducted during the year were improvements to the canal of the Mauzac factory, the renovation of the alternators at Pizançon, the treatment of the penstocks at Luz 1, the rehabilitation of a generation unit at the Kembs plant, and the renovation of the gates at Cadarache.

## Report

In accordance with the law on nuclear transparency and safety of 2006, all of the nuclear units published nuclear safety and radioprotection reports in 2007, outlining measures adopted, any incidents or accidents, and the type and amount of radioactive discharges and waste produced. The reports include appendices with recommendations made by the Health, Safety and Working Conditions Committee (*Comité d’hygiène, de sécurité et des conditions de travail – CHSCT*).

1. See Sustainable Development Report.  
2. *Agence nationale pour la gestion des déchets radioactifs*.



# Regulated businesses in France



EDF's transmission and distribution businesses in France are managed by specific subsidiaries that are independent<sup>1</sup>: RTE is responsible for transmission operations and ERDF, a subsidiary created on January 1, 2008, for the distribution activities. Both are investing heavily to keep up with growing demand. They are accountable<sup>2</sup> to the Energy Regulation Commission (*Commission de Régulation de l'Énergie* – CRE) for the transparent and non discriminatory nature of their services.



## RTE

**100,000 km**  
of high voltage  
and ultra-high  
voltage grids  
(63 kV – 400 kV)

—

**44 cross-border  
lines**

—

### RTE EDF Transport, the independent transmission network operator

The law gives RTE, a wholly-owned subsidiary of the EDF Group, a specific status that, under the supervision of the Energy Regulation Commission, guarantees its independence and neutrality.

RTE is entering a new phase of its investment program, preparing to spend close to €950 million a year between 2008 and 2011. Tariff adjustments should help finance these investments. The funds spent in 2007 (€792 million) mainly went to securing the national network.

### An independent distribution network operator

#### 2007 devoted to reorganization

The organization and management of the distribution activities underwent unprecedented changes when the residential market was opened to competition. These changes were successfully implemented thanks to the dedication of EDF employees

and to cooperation with the Customer Branch.

The IT solutions required to unbundle the 28.4 million customer accounts were deployed gradually, drawing from our experience with the opening of the professional market in 2004. Six months prior to full opening, all EDF suppliers could access the EDF portal to become familiar with the new IT solutions. The next steps will focus on communication with suppliers' IT systems and lead times for connection.

### Creation of ERDF

EDF subsidiary ERDF (*Électricité Réseau Distribution France*) has been operational since January 1, 2008. It has its own supervisory and management boards, and its governance rules guarantee that it is independently managed. Most ERDF employees report to a service that is shared with the Gaz de France distribution subsidiary. In 2008, ERDF will develop an industry, employee and society project focused on improving quality of services and supply,



## ERDF

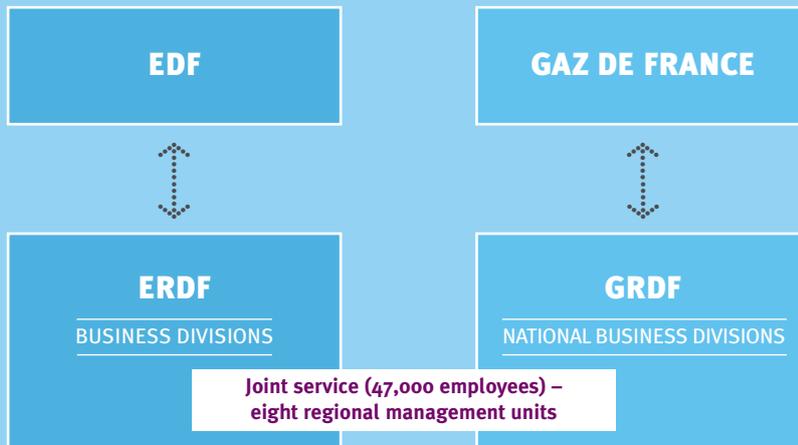
**1.27 million km**  
of high and low voltage lines

**35 million** meters  
**1,200** concessions  
**4,292** producers connected

**94%**  
ERDF supplies electricity  
in 94% of towns



→ ORGANIZATION OF DISTRIBUTION IN FRANCE:  
TWO INDEPENDENT SUBSIDIARIES FOR EDF AND GAZ DE FRANCE,  
ONE JOINT SERVICE



recruitment, and vocational training. It will also be preparing to negotiate its Public Service Agreement for 2008–2010, tariffs for using the public transmission and distribution networks (*Tarif d'Utilisation du Réseau Public – TURP*), and employment agreements.

### Island Energy Systems (IES)

IES are electric systems that are only partially or not at all interconnected to the continental mainland network, chiefly the French overseas departments, Corsica and Saint-Pierre and Miquelon. These regions benefit from the same tariffs as continental mainland even though generation costs are much higher there. The additional costs are offset by the contribution to the public service charges for electricity (*Contribution au service public de l'électricité – CSPE*). Competition between generators has been introduced through calls for tenders launched by public

authorities, EDF being the single buyer. This competitive framework is efficient. On Reunion Island, EDF only accounts for half of generation Francony. Significant growth in electricity consumption requires investments in generation facilities and networks. In 2007, the Rizzanese dam project got underway in Corsica, as did the extension of the Rivière de l'Est hydro facility on Reunion Island. EDF has handed its generation activities over to a holding company subsidiary, PEI (Production Énergie Insulaire, or Island Energy Generation), which will include all of the plants, each established as a separate company.

1. Because RTE and ERDF publish their own annual reports, their businesses are only discussed briefly here.
2. Energy Regulation Commission.

### → RTE'S PURPOSE

Maintain, operate and develop the national electricity transmission grid

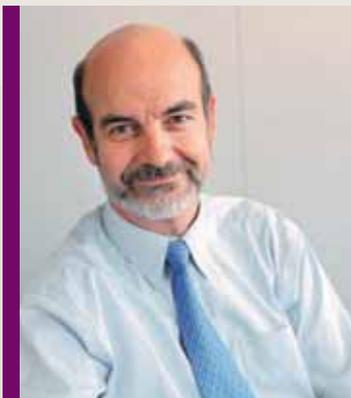
- Oversee the operation and safety of the electric system
- Guarantee continuity and quality of supply to network users (industrial customers, distributors, producers and suppliers)
- Assure that conditions for network access are transparent and non-discriminatory for all users

### → ERDF'S PURPOSE

- Operate, maintain and develop the electricity distribution networks in France under concession agreements with local authorities
- Guarantee that network access conditions are transparent and non-discriminatory
- Assure interconnection with other networks

Reunion Island was hit by Cyclone Gamede in February 2007 and Martinique and Guadeloupe by Hurricane Dean in August. The latter put 70% of the low-voltage network in Martinique out of service. Power was restored in record time with support provided by mainland France. Island Energy Generation is investing €40 million to rebuild and strengthen these networks.

MÉDIATHÈQUE EDF – RICHARD SCHROEDER



**The French business model used in France has shown that it is possible for a transmission network operator to be both independent and neutral within an integrated group. In seven years, RTE has not been involved in a single major dispute with the 700 French and foreign users of the transmission network. It is even cited as an example throughout Europe."**

**Michel Francony**, Senior Executive Vice President, Regulated Operations in France  
On January 1, 2008, Michel Francony became CEO of ERDF and is thus no longer with the EDF Group.



## KEY FIGURES

Sales:

**€8.4 billion**

**8.4%**

Group EBITDA  
contribution

Customers:

**5.5 million**

Customer accounts  
(including gas)

Employees:

**13,158**

Installed capacity:

**4.9 GWe**

Generation:

**25.5 TWh**



# EDF Energy

## Doing well in a challenging environment

→ EDF Energy performed well in 2007, despite an unfavorable environment of highly volatile primary energy prices and downward pressure on electricity and natural gas sale prices, particularly in non regulated activities.

MÉDIATHÈQUE EDF - RICHARD SCHROEDER



“  
In a challenging pricing environment, EDF Energy worked on achieving operating excellence and maintained its market shares and earnings.”

Vincent de Rivaz  
EDF Energy, CEO

### An integrated energy provider

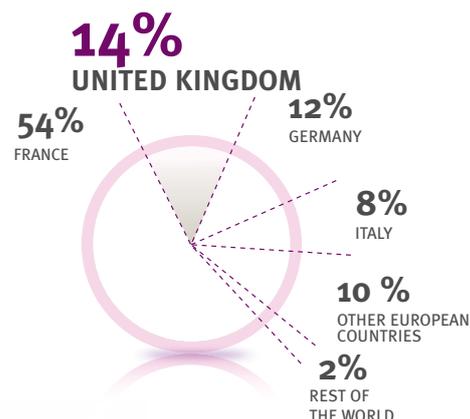
EDF Energy, a wholly-owned EDF subsidiary, is a distributor of electricity and gas in London and the east and southeast of England and a marketer of electricity and gas in the UK (52.4 TWh of electricity and 28.7 TWh of gas). Its generation fleet includes the Sutton Bridge combined cycle gas plant, two coal-fired units at Cottam and West Burton, and windfarms in Northeast England.

### Improving operating performance

#### Optimizing sales and marketing

EDF Energy teams mobilized to optimize performance across the board in a challenging environment. A new IT system was set up to track margins generated with the largest customers (£2 billion of sales). On the residential front, the company overhauled its Cost Information System with the twofold aim of becoming a preferred supplier based on service quality and ensuring that each customer account is profitable. Further investments were made in customer service. These efforts produced results, even in a highly competitive environment. The customer portfolio stabilized and a number of new accounts were won during the year. Billings and payments both improved, translating into additional cash flow and earnings.

### BREAKDOWN OF EDF GROUP SALES





## Scientific/ university partnerships

- **Support for the Energy Technologies Institute set up in 2007**
- **R&D framework agreement with the University of Manchester**

The coal-fired stations at West Burton (left) and Cottam (right) are now equipped with systems to cut SO<sub>2</sub> emissions by 94%. The British government has approved the construction of a combined-cycle gas turbine power station at the West Burton site.



MÉDIATHÈQUE EDF – PHILIPPE ERAMIAN



### Showing excellence as a network operator

The EDF Energy Networks Branch is relying on a wide-scale overhaul of its organizational structure to become the most efficient network in Great Britain by 2009. Large contracts have been signed for private electricity networks. During 2007, EDF Energy completed the installation of the critical electricity infrastructure for the new link from the Channel Tunnel to St. Pancras station in London. The infrastructure includes a very high voltage line bringing electricity to the Eurostar from a 400 kV line, through 59 substations. The contract came in addition to numerous others, including one for the Heathrow, Gatwick and Stansted airports serving London. EDF Energy is also taking part in joint ventures like MUJV Limited, with Thames Water Services, to set up water, gas and electricity networks to the new infrastructure being built for the Ministry of Defence.

### Ongoing efforts to help vulnerable customers

EDF Energy was cited by the regulator as the supplier with the most efficient services for vulnerable customers, particularly for its Energy Assist social tariff (15% discounts offered to 50,000 customers), its energy efficiency advice, and the assistance provided to customers in obtaining the public aid to which they are entitled. The company has also paid £7 million into its Energy Trust Foundation since 2003. The Energy Trust Fund is used to provide help and advice to vulnerable customers.

### Keeping the focus on the climate and security of supply

#### A leading role in the UK energy debate

As a key player in the British electricity market, EDF Energy has been deeply involved in the energy debate, particularly in consultations held by the government on proposed legislation to reduce greenhouse gas emissions and guarantee security of supply. EDF Energy focused on the benefits of energy efficiency, renewable energies and nuclear power.

The British government launched a consultation on the future of nuclear power in May 2007. The EDF Group, which had set up a Nuclear Project team in London in 2006, took an active part in it. Early in 2008, the government decided in favor of a nuclear revival. The Group plans to build and manage up to four EPR reactors there, alone or through partnerships, provided that the regulatory and political environment is favorable to such a move.

Leading distributor with  
**7.9 million**  
sites connected

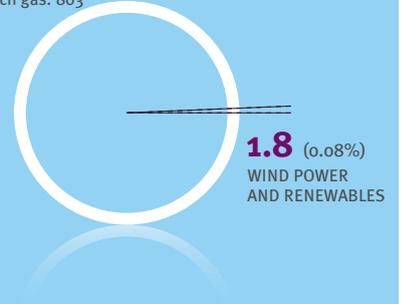
**52.4 TWh**  
Electricity sales

**28.7 TWh**  
Natural gas sales



## INSTALLED CAPACITY (IN MW)

**4,863** (99.92%)  
FOSSIL – FIRED  
- of which coal: 4,060  
- of which gas: 803



In 2007, EDF Energy installed a private electricity network for the new Channel Rail Link to the international station at St Pancras.

### Investing in a sustainable energy future

In June 2007, EDF Energy committed to reducing the carbon intensity of its electricity generation activities by 60% by 2020. It also launched a project, approved by the government in October, to build a 1,311 MW combined-cycle gas turbine power plant at West Burton. Work will get underway in 2008 and the plant should be commissioned toward 2011.

In addition, EDF Energy stepped up its cooperation with EDF Energies Nouvelles for the development, construction, purchase and operation of renewable energy generation units in the UK, including onshore and offshore windfarms, solar, biomass and micro-hydro plants. It is targeting a capacity of 1,000 MW by the next decade. In September, EDF Energy was

given the green light for a 90 MW offshore windfarm near Teesside, in Northeast England.

In 2007, EDF was selected as a tier-one “sustainability partner” for the London 2012 Olympic Games. EDF Energy will supply energy to the Games using renewable sources and provide a low-carbon Olympic flame. The core of the partnership is EDF Energy’s 2012 Carbon Challenge, whereby consumers pledge to use practical measures to reduce their home energy carbon footprint by 15% by 2012. At end 2007, 25,000 people participated to this challenge.

1. Per MWh, based on forward prices.

### ENERGY SAVINGS

EDF Energy has begun to install 3,000 interactive dual-fuel meters. The meters display information on screens to help customers save energy.

### BRAND RECOGNITION

EDF Energy brought all of its activities under the EDF Group brand and logo in May 2006. Brand awareness rose from 27% to 82% in November 2007, putting it in the number-one slot alongside British Gas.

Networks:

**182,000 km**

## British electricity market<sup>1</sup>

**£33/MWh** by end 2006

**£53/MWh** by end 2007



## KEY FIGURES

Sales:

**€6.9 billion\***

**6.8%\***

Group EBITDA  
contribution

Customers:

**6 million**

(including gas)\*\*

Employees:

**9,336\***

Installed capacity:

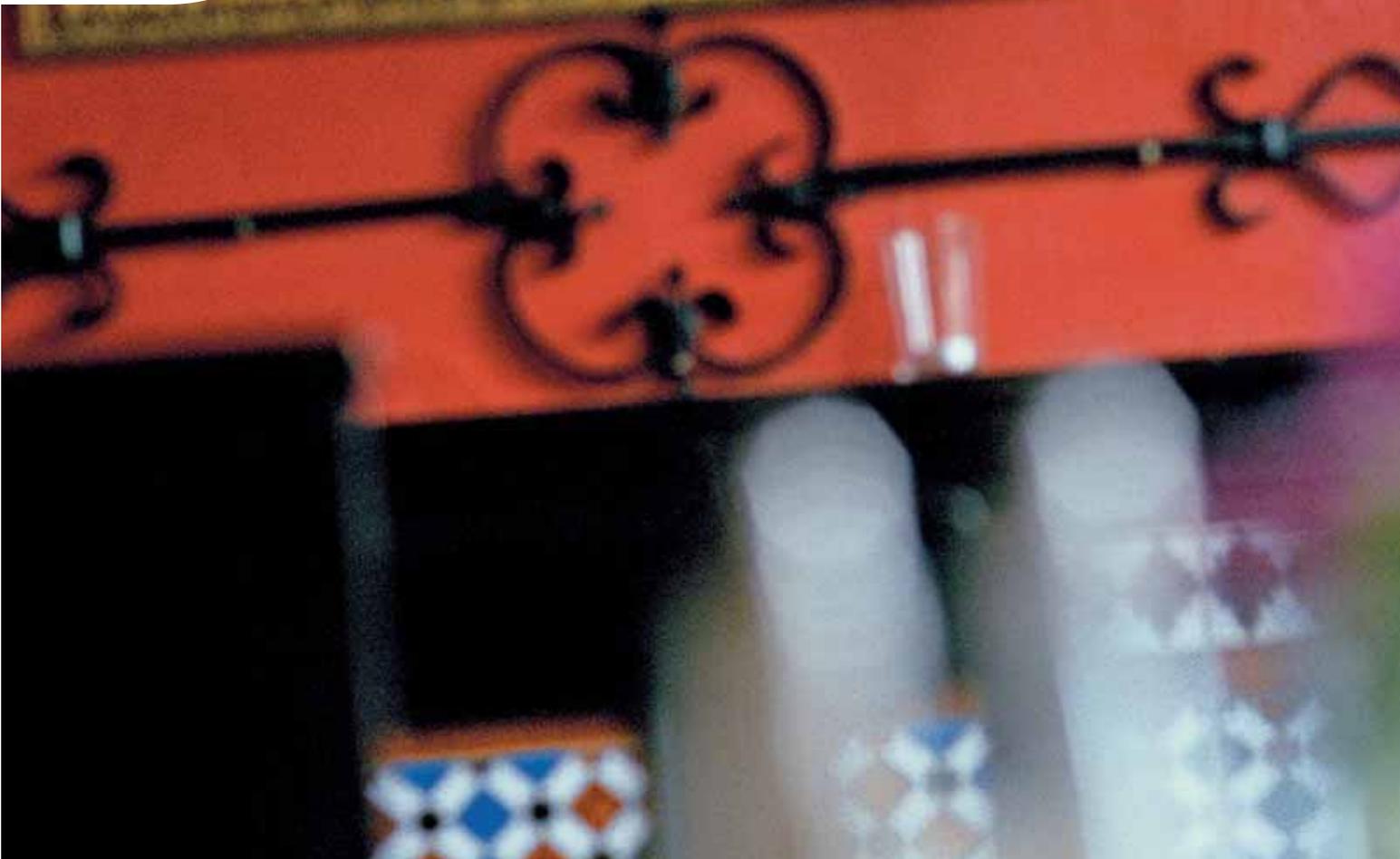
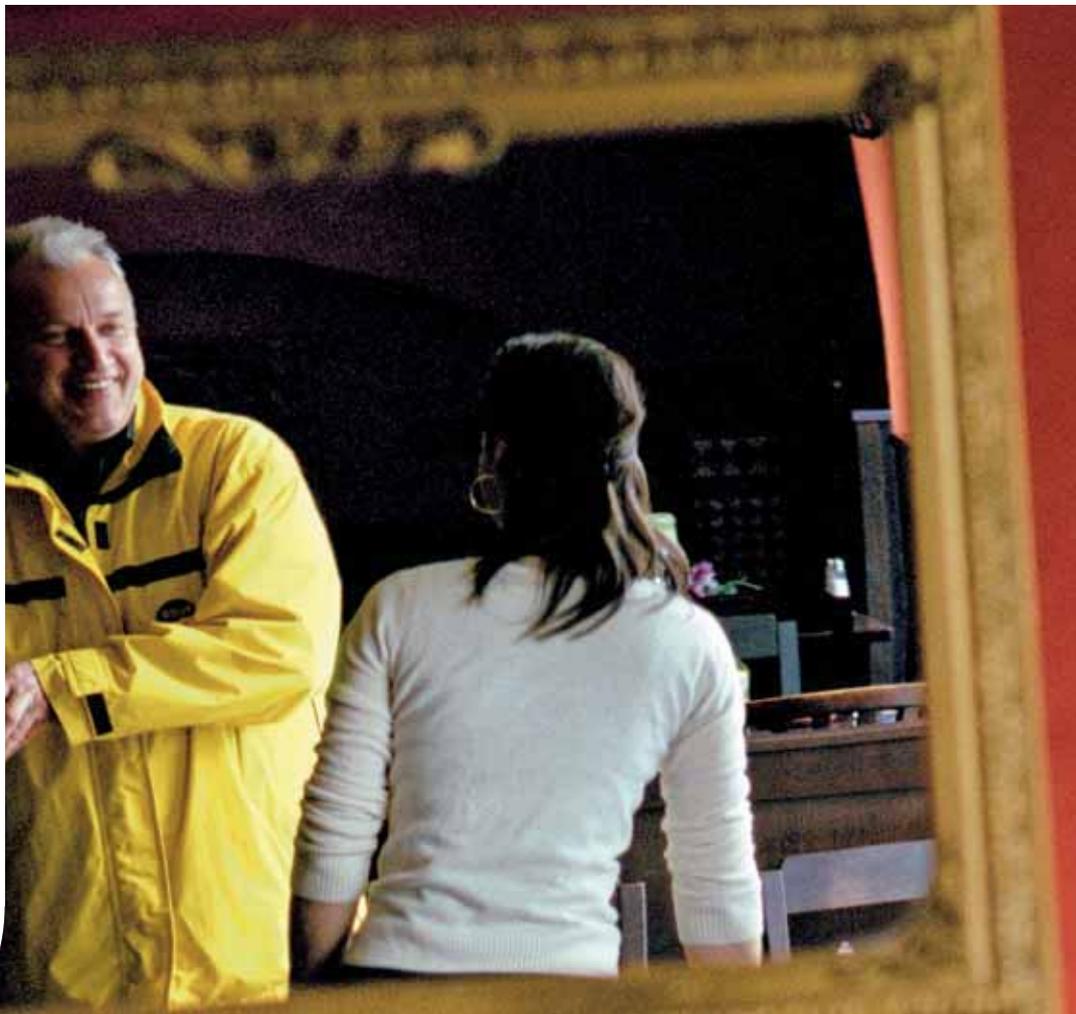
**15.0 GWe \*\***

Generation:

**73.5 TWh \*\***

\* EDF Group contributive data.

\*\* Source: EnBW 2007 annual  
report.



# EnBW

## Delivering results

EnBW, the third-ranked energy player in Germany, reaped the benefits in 2007 of several years of cost-cutting and a relatively buoyant market, where prices remained high. The year's particularly positive results were made possible by efficient generation facilities and a dynamic sales and marketing strategy.

### Results trending steadily higher

EnBW, the incumbent operator in the Baden-Wurtemberg region, has a balanced model that combines electricity generation, transmission-distribution, trading and electricity and gas sales and marketing. The company further reduced its net debt in 2007.

Having successfully completed the €1 billion TopFit cost-cutting program between 2003 and 2006, EnBW launched *Operative Exzellenz* in 2007. The goal is to optimize operating processes through active involvement of all parties, and thus generate sustainable gains.

### Building on the generation fleet

EnBW has a balanced generation mix that emits less CO<sub>2</sub> than other German electricity companies. It relies on nuclear and hydro for base load production and coal-fired plants for base load and semi-base load, and meets peak demand with gas- and oil-fired facilities and pumping stations. The company is boosting its hydro generation with the Rheinfelden plant which will come on stream by 2010 and whose capacity will increase from 26 MW to 100 MW.

EnBW is adding to its electricity generation capacity as well, following the decision made late in 2006 to build a 900 MW coal-fired plant at Karlsruhe, where it may also build a gas-fired facility. In addition, the company has plans to invest in geothermal. The supply contract signed with STEAG (in the Ruhr) guarantees the availability of 250 MW of generation capacity over 20 years starting in 2010. EnBW intends to expand in Eastern Europe and Turkey.

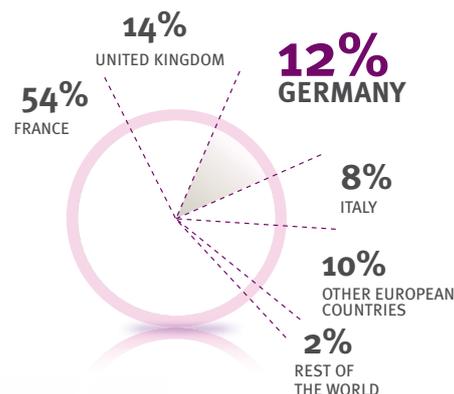
MÉDIATHÈQUE EDF - STÉPHANE LAVOUË



**In a very competitive market and tight environment, EnBW was able to improve its performance through a proactive selling policy supported by highly creative marketing.”**

**Hans-Peter Villis**  
EnBW, President of  
the Executive Board

### BREAKDOWN OF EDF GROUP SALES





EnBW smart meters will allow customers to monitor their energy consumption on line.

➔ **Dynamic sales and marketing in a highly competitive environment**

**Progress made in 2007**

EnBW sold 140 TWh of electricity to 6 million customers in 2007, in a highly competitive market in which resellers are gathering momentum. It won more than 150,000 new customers in all, including large industrial users like Daimler and Bosch, as well as major cities like Stuttgart. Thanks to the joint selling strategy with EDF for large industrial users, EnBW won contracts for the German facilities of steel producer Riva, representing total electricity supply of 3,500 GWh in 2008 and 2009.

**An innovative marketing approach**

EnBW is pursuing a multi-brand approach, competing under the *EnBW* brand in the Baden-Wurtemberg region, the *Yello* brand in the residential market across Germany, *Watt* in the SME market and *Naturenergie* for electricity generated using renewable sources. Yello enjoys strong brand recognition and serves 1.4 million customers in Germany. In September, it also entered into the highly

competitive and fully deregulated Swedish market.

EnBW's sales and marketing strategy is based on differentiation through services. EnBW and Yello are testing smart meters that allow customers to track their electricity consumption on line, thus paving the way for the development of new, innovative products and services.

**A major player in electricity and gas transmission and distribution**

EnBW owns and operates the electricity transmission network (380-220 kV) in the Baden-Wurtemberg region and manages interconnections with the other networks. Since it owns most of the high and medium voltage network (110 kV – 20 kV) in its historic market, it is also very active in distribution (20 kV – 400 V). Most of concession contracts signed by EnBW should be renewed between 2008 and 2012, thanks to a structured action plan implemented over several years now. EnBW also holds stakes in some 50 Stadtwerke<sup>1</sup> and local companies that operate distribution networks.

**140** electricity distribution concession contracts renewed in 2007

**EnBW Trading**  
a leading player in the German power exchange



Early in 2007, EnBW strengthened its positions in the Baden-Wurtemberg region and Eastern Saxony by lifting its stakes in three local supply companies: Erdgas Südwest (to 79%) Énergie Sachsen Ost (to 64.84%) and Gasversorgung Sachsen Ost Wärmeservice (to 100%).

Like the competition, EnBW was hit in 2006 by an 8% cut in access tariffs for its electricity transmission network. Access charges for its electricity distribution network were reduced by 14% and charges for access to the gas distribution network by 17%.

### Securing gas supply at competitive prices

#### Investing in infrastructure

EnBW is involved in this market via EnBW Trading, which expanded its activities in 2007 to include physical trading of gas in Germany and neighboring countries and, more importantly, via GVS, a 50-50 JV with ENI. With 1,892 km of gas pipelines and 90 million cubic meters of storage capacity, mainly in the Baden-Wurtemberg region, GVS sells gas exclusively to redistributors, and only counts a few industrial users as direct customers.

Faced with ever stiffer competition, EnBW is investing to gain access to gas at lower prices. To bolster its control over infrastructures, it signed a memorandum of understanding with 4Gas for the LionGas LNG terminal project in Rotterdam, which is scheduled to

be operational in 2011. The agreement gives EnBW 15% of the facility with capacity rights to 3 billion cubic meters of gas a year.

EDF and EnBW entered into agreements in May 2007 with IVG Immobilien to be joint investors in and have rights to store natural gas (400 million cubic meters) in underground salt caverns in Etzel starting in 2010. EDF and EnBW are also part of the consortium building the 56 km gas pipeline between the Etzel storage site and the Dutch gas transmission network.

#### Yello's new gas offer

EnBW markets gas to residential customers in the Baden-Wurtemberg region primarily through EnBW Gas and ODR. In Saxony and Dusseldorf, it works through ENSO Erdgas GmbH and Stadtwerke Düsseldorf. Yello launched a new gas offer in October 2007, solely in Nuremberg (Bavaria) and Essen (North-Rhine Westphalia) for now, these being large local markets with favorable conditions for new entrants. Yello's new customers have access to smart meters.

1. Municipal utilities.

## 2007 Further improvement in the financial situation and margin expansion over the year

150,000 new customers

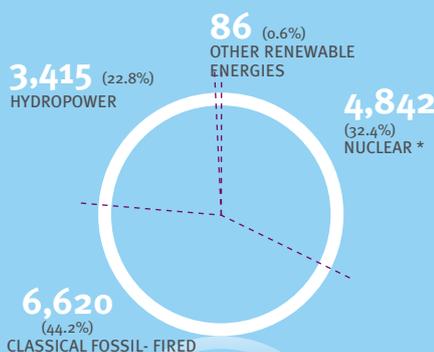
### NUCLEAR

The International Atomic Energy Agency (IAEA) conducted an Osart<sup>2</sup> review at the Neckarwestheim nuclear plant in October 2007. EnBW is the only nuclear operator in Germany to have had all of its operating units inspected by the IAEA in recent years.

2. Osart: Operational Safety Review Team, inspection conducted by the International Atomic Energy Agency.

### INSTALLED CAPACITY (in MW)

Total  
14,963



Source: EnBW 2007 annual report.

\*Including EDF contracts.



MEDIA THÉQUE EDF – FRANCK SHULTZE



## KEY FIGURES

Sales:

**€4.7 billion\***

**6%\***

Group EBITDA  
contribution

Electricity  
and gas customers:

**187,000\*\***

Employees:

**1,449\***

Installed capacity:

**12.5 GW\*\***

Generation:

**53.3 TWh\*\***

\* EDF Group contributive data.

\*\* Edison sources.

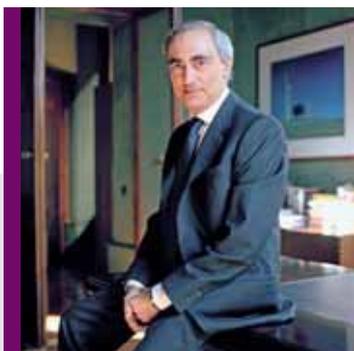


# Edison

## Meeting targets with upgraded industrial facilities

Edison is reaping the benefits of its efforts to upgrade and expand its generation facilities. Strengthened by these investments, the company is pursuing a strategy designed to control the entire gas supply chain, develop renewable energies and participate in the EDF Group's geographic expansion in Southeast Europe and particularly in Turkey.

MÉDIATHÈQUE EDF - RICHARD SCHROEDER



“Edison will gear its investment in generation assets toward renewable energies and hydrocarbon exploration and production to bolster its reserves. The focus will also be on importing gas to meet the needs of the CCGT plants and respond to growing demand in Italy.”

**Umberto Quadrino**  
Edison, CEO

### A key player in the Italian electricity market

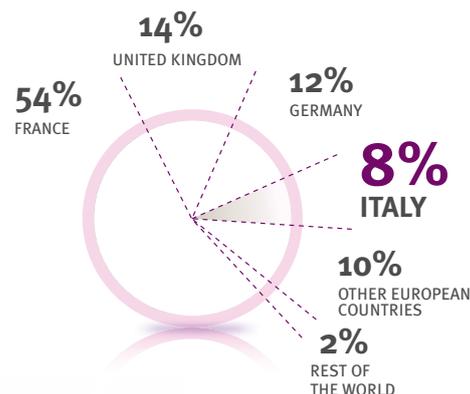
EDF owns 48.96% from Edison alongside A2A, which was born from the merger of municipal utilities Milan AEM and ASM Brescia. Edison generates, imports and markets electricity and produces hydrocarbons (natural gas and oil).

### Number two in generation

#### A state-of-the-art and powerful fossil-fired generation fleet

With the start-up of the Simeri Crichi 850 MW CCGT in Calabria and Edipower's Turbigo facility (850 MW, 50% owned by Edison), Edison completed during the year the program voted in 2001 to add 7,000 MW to its electricity generation capacity. The program, one of the most ambitious seen in the European energy sector in the last decade, involved connecting eight CCGTs, of which two owned by Edipower, to the network. The units give Edison a modern, competitive and safe fleet that meets over 15% of Italy's electricity generation needs.

### BREAKDOWN OF EDF GROUP SALES





As part of the refocus on marketable generation, Edison sold seven small, older facilities late in the year (540 MW of combined capacity, devoted to subsidized generation).

Edison is also developing renewable energies. A total 10 MW of wind power were brought on stream in 2007, a further 84 MW are being built, and construction permits have been obtained for 30 more.

### Expansion in Greece

In July 2007, Edison set up a 50-50 joint venture with Greece's Hellenic Petroleum. The JV will have a CCGT (over 390 MW) already in operation and another 400 MW unit that Edison is developing in Thisvi. It is considering building a coal-fired plant in Astakos. Edison is thus capitalizing on the deregulation of the Greek market and aims to become the country's second largest player by generation volume.

### Optimizing sales

Electricity prices are particularly high in Italy, which is the European Union's fourth largest market and growing fast. Inadequate interconnection is preventing the country from taking full advantage of the European market. Supply has nonetheless been secured thanks to the significant investments national operators have made in generation capacity. Edison succeeded in optimizing its sales in Italy in 2007 by reorganizing its customer segmentation. Total sales amounted to 63.6 TWh, of which 41.2 TWh on the open market (27.5 TWh to customers including resellers and 13.7 TWh on the power exchange). The remaining 22.4 TWh were sold on the regulated market).

### Italy's third leading gas supplier

#### Developing infrastructure for secure supply

Edison powered ahead in 2007 with its strategy of securing supply, positioning itself to take full advantage of increasing demand in Italy. Its projects are in keeping with the EDF Group's gas strategy for Europe.

Edison is taking part in developing the offshore LNG terminal at Rovigo. Construction of the facility is being completed in Algeciras, Spain, and it will be installed mid-2008, 15 km off the coast of Rovigo. It will have an annual regasification capacity of 8 billion cubic meters, of which Edison will market 6.4 billion cubic meters. Edison has finished building the pipeline that will carry the gas from the Rovigo terminal to the public network. The Galsi pipeline (900 km) designed to import Algerian gas to Tuscany via Sardinia is also on track to be in service by 2012. Edison, the main Italian partner in the project, will sell 2 billion cubic meters of gas supplied by Algeria's Sonatrach annually. The ITGI pipeline linking Turkey, Greece and Italy is also expected to be ready to bring

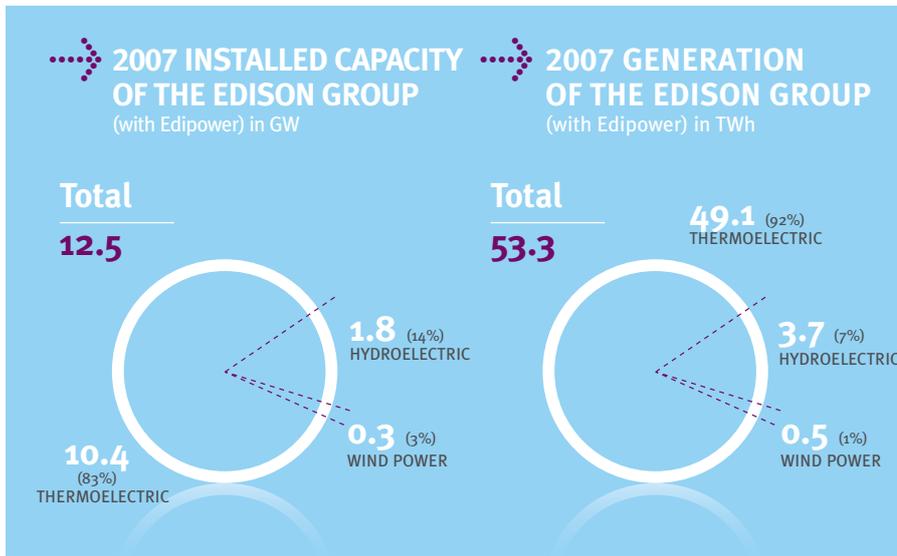
Edison has gas storage sites at Collalto and Cellino Attanasio (shown here). A third is being planned.



**270 MW**  
of wind power

**57% efficiency rating**  
for the CCGT plant at Simeri Crichi  
equipped with latest generation gas turbines





**17.7%**  
of Italian  
electricity market

**Positive**  
trend in financial  
results

**Completion**  
of investment  
program  
(7,000 MW)

gas from the Caspian Sea Basin by 2012. Edison has already secured access to 80% of the transmission capacity of the Greece-Italy segment.

#### Bolstering storage

Edison has two underground gas storage facilities at Collalto and Cellino and received administrative authorization in 2007 to build a third facility at San Potito-Cotignola.

#### Relying on exploration and production to boost own reserves

Edison is stepping up its exploration and production in Algeria, where six appraisal wells were drilled in 2007, and in Croatia, where it has plans to develop an offshore reservoir. It also won a new concession in the Ivory Coast. Working with international partners, Edison obtained five exploration licenses in Norway, and is cooperating with Petrobras on a deep offshore exploration project in Senegal.

Edison invested some €58 million in exploration in 2007, of which €3 million in Italy and €55 million in other countries,

chiefly Algeria (three wells drilled), the Ivory Coast (one drilling project) and Senegal (acquisition of a seismic survey). Edison was also issued another exploratory block in Egypt.

#### A new phase of development from 2013

In November, the Edison Board of Directors approved the industrial plan for 2008-2013 calling for investments totaling €6.2 billion. Of this, €3.2 billion will be devoted to security of supply, including €2 billion for boosting production and reserves. The goal is for the gas-fired units to be completely autonomous and highly flexible and, most importantly, to gain access to natural gas at competitive prices for customers in Italy, in anticipation of a sharp increase in demand. The remaining €3 billion will be invested in electricity generation in Italy and elsewhere, mainly Greece and the Balkans, with an emphasis on renewable energies (€1 billion, wind power and hydro). By 2013, Edison plans to have 2,700 MW of renewable energy capacity.



Edison and EDF R&D are working together on a program devoted to energy efficiency and transportation.

#### FENICE

Fenice, a wholly-owned EDF subsidiary, markets energy efficiency services in Italy and is developing cogeneration facilities. Its long-standing contracts with the Fiat Group have been extended to the end of 2012. Fenice is continuing to expand on the Italian and Spanish industrial cogeneration markets, winning three installation contracts during the year in Italy – Ecoespanso (30 MW), Comais (3 MW) and Ergom (5 MW) – and one in Spain for Colortex (12 MW).

**2.2 Gm<sup>3</sup>**  
of total storage capacity  
by 2012

**39.7 billion cubic meters**  
of hydrocarbon reserves (vs. 30 in 2006)



## KEY FIGURES

Sales:

**€6.2 billion\***

**10.9%**

Group EBITDA  
contribution\*

Customers:

**1,113,868\***

Installed capacity:

**3,949 MW\***

Generation:

**20,461 GWh\***

\* EDF Group contributive data.



# Other European countries

## Making progress in deregulated markets

➤ The EDF Group is adding to its positions on several Western European markets and continuing to revamp its generation facilities in Poland and Hungary. The distribution subsidiaries and affiliates in Hungary and Slovakia were well prepared for market opening.

### **BENELUX: investing in generation and sales growth**

In 2007, EDF and Delta NV set up a 50-50 JV in the Netherlands, Sloe Centrale BV, to build and operate an 870 MW natural gas-fired plant. Construction got underway in the spring of 2007 and the unit should be commissioned in 2009.

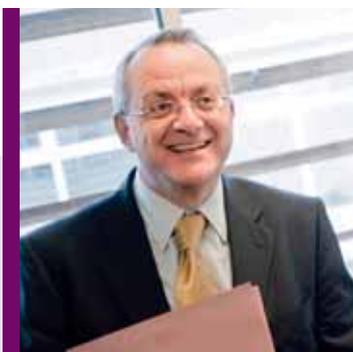
In Belgium, EDF Belgium is taking part in the generation and sales and marketing activities of the EDF Group, which has guaranteed capacity of 419 MW via its 50% stake in the Tihange 1 nuclear power plant. In May 2007, an IAEA Osart review confirmed the quality and safety of the plant's operations. EDF Belgium is focusing

its sales and marketing efforts on business users. Its electricity sales climbed to 3.6 TWh over the year. Following a successful experiment with gas sales in 2006, the company launched into this activity in 2007 and sold 0.2 TWh of gas to business users during the year.

### **SPAIN: supplying twice as many sites**

Hispaelec Energia, a wholly-owned EDF subsidiary, offers electricity supply services and tailored advice to its customers, more than 60% of which are large European groups. The number of sites supplied doubled between 2006 and 2007, lifting sales volumes to 528 GWh.

MÉDIATHÈQUE EDF - LIONEL CHARRIER



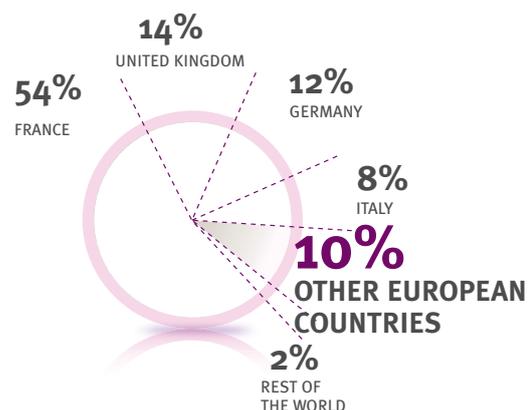
“

Our Group is rooted in Europe and generates the bulk of its business there. We had prepared for the opening of electricity and gas markets and the creation of the single market, which will be a source of new opportunities for us.”

**Gérard Wolf**  
Senior Executive Vice President,  
International Operations



### **BREAKDOWN OF EDF GROUP SALES**



## OTHER EUROPEAN COUNTRIES



**+25.5%**  
(organic)

**Dynamic sales growth in Hungary driven by price increases.**

### **SWITZERLAND: a central location**

Located at the heart of electricity exchanges in Europe and offering significant peak hydro generation capacity, Switzerland is industrially strategic for EDF and will be even more so when the electricity sector is opened to competition in 2008. EDF owns stakes in hydro facilities and in Atel Holding, which is active throughout Europe in electricity generation, trading and distribution and in the installation of energy systems. EDF is pursuing negotiations with its Swiss partners to create the leading energy company in Western Switzerland by 2009.

### **HUNGARY: posting good results in an open market**

The EDF Group is active in Hungary through Demasz and BERT.

Demasz distributes electricity to 770,800 customers and sells on the open market (1.4 TWh) and under regulated tariffs (3.4 TWh). On January 1, 2007, it unbundled its distribution and sales and marketing activities before the legal deadline.

BERT covers 60% of Budapest's urban heating needs with three recent CCGT plants (410 MWe). It was able to limit the negative impact of the drop in heating needs owing to an unusually warm winter. On the other hand, sales increased over an exceptionally hot summer, during which the company focused on productivity and energy eco-efficiency, reducing its fuel consumption and carbon emissions by an average 10%. BERT benefited from the gradual opening of the Hungarian gas market by negotiating a first contract, which has translated into substantial savings.

### **SLOVAKIA: gathering sales momentum**

SSE (49% EDF) distributes and sells electricity to 699,600 customers in Central Slovakia. In July 2007, it unbundled its distribution and sales and marketing activities and created SSE-Distribution. The opening of the residential market has given SSE fresh sales momentum. The company is also very active in carbon allowance trading. SSE established a foothold in the Czech Republic by winning an international call for tenders launched by Metro, one of the EDF Group's largest European customers. SSE will supply all of Metro's sites in that country as well as in Slovakia (80 GWh in 2008). It is continuing to fulfill large sales contracts signed with customers like PSA and Kia Motors, focusing on service quality. Quality of supply at the distribution business improved sharply in 2007.

SSE is planning to build gas turbines to provide adjustment services to SEPS, which manages the electricity network in Slovakia.

### **POLAND: Investing in the environment**

The Polish market was fully opened to competition in July 2007, and Everen is now the sole marketer of electricity generated by the Group's five plants in that country. Following in the footsteps of ERSA and Kogeneracja SA in 2006, EC Krakow now has a biomass co-combustion facility. The Group's plants were thus able to deliver 176 GWh of green energy in 2007. The construction of ERSA's wet desulfurization system is advancing according to schedule, and EC Krakow, Kogeneracja SA and EC Wybrzeze's cogeneration facilities have been using low-sulfur coal since 2007. Efforts to improve productivity allowed the Polish plants to boast improved results in 2007.

**Atel Holding**

**1,567 MW** in Switzerland

**1,323 MW** in Italy

**824 MW** in Central and Eastern Europe

**SSE-Distribution**

Incident-related outages

**down 20%**

(average duration and frequency)

Outages due to scheduled work

**down 40%**

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