
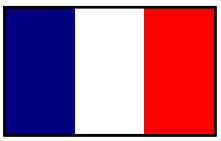

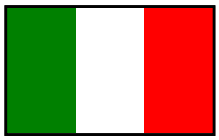
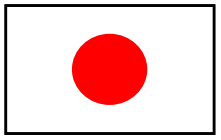


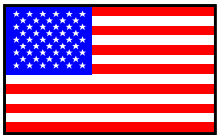

e8 Member Companies' Best Practices for the Smart Use of Electricity

May 26, 2010
Tokyo, Japan

Summary of Best Practices for the Smart Use of Electricity by e8 Member Company

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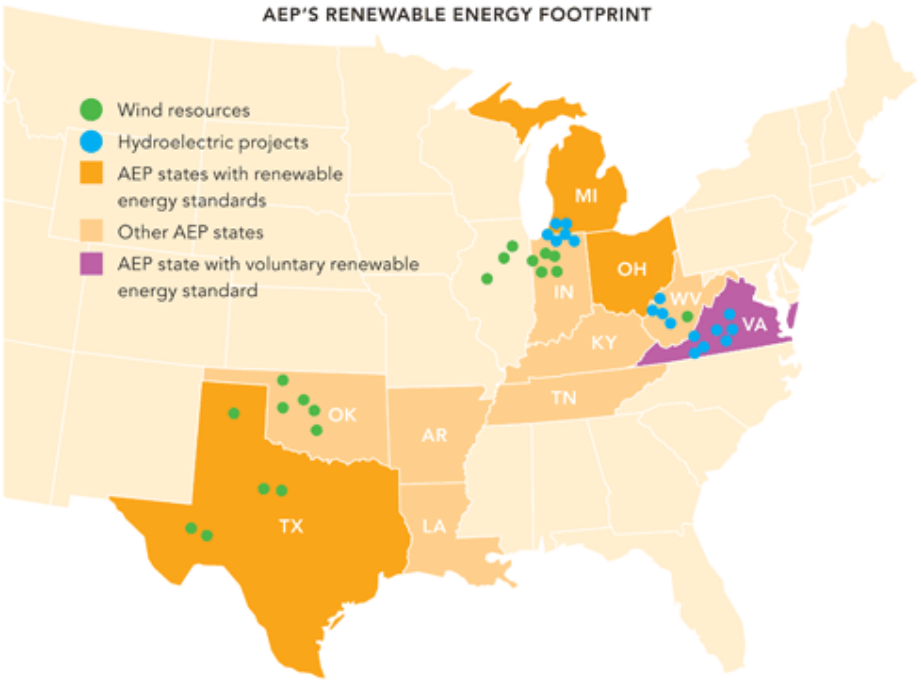
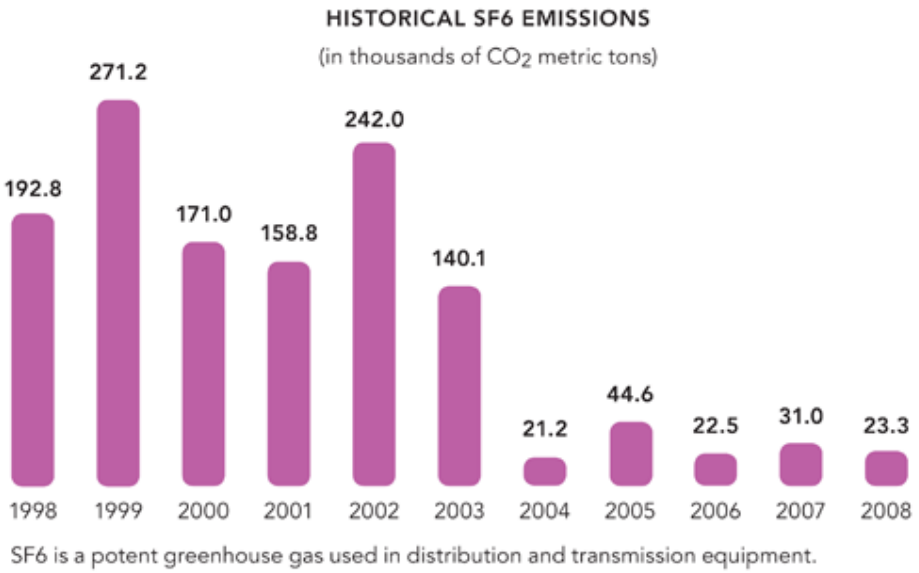
As a founding member of the Chicago Climate Exchange (CCX), AEP committed to cumulatively reduce or offset 48 million metric tons of CO_2 emissions from 2003 to 2010. Through 2008, we reduced or offset 51 million metric tons of CO_2 — exceeding our target. We've done this in a number of ways, such as improving power plant efficiency, replacing or retiring less efficient and higher emitting units, increasing our use of renewable power, reducing SF6 emissions and investing in forestry projects in the United States and abroad. For example, we have signed contracts to add 903 MW of wind capacity in the past two years — about 90 percent of our goal toward adding 1,000 MW of wind by 2011. Consequently, we will double this goal and add a total of 2,000 MW of renewable energy by the end of 2011, with regulatory support. This will help us to further diversify our fuel portfolio. Our upcoming integrated resource plan likely will contain a minimal 10 percent renewable energy target by 2020. We already are planning to go beyond our initial commitment.



AEP has made significant progress in reducing a potent GHG — SF6 — which is found in some electrical equipment. When AEP joined the Environmental Protection Agency's (EPA) SF6 Emission Reduction Partnership in 1999, our SF6 leakage rate was 10 percent. In 2008, this rate had been reduced to 0.38 percent based on total system capacity, falling well below a self-imposed goal to achieve a maximum 2.5 percent leak rate from 1996 levels. We did it by employing a combination of technologies such as putting new breakers on lines to lower rates of SF6 leakage, investing in leak detection cameras and training field crews on SF6 gas handling procedures.



SF6 is a potent greenhouse gas used in distribution and transmission equipment.

Our post-2010 strategy is to voluntarily reduce or offset an additional 5 million tons of CO_2 per year by purchasing offsets from projects such as forestry, reducing methane from agriculture, adding more renewable energy in our portfolio and improving the efficiency of our power plants. The investments we have made in our coal-fired power plants make them more efficient than the national average for coal plants. Between 2001 and 2007, these improvements helped us to avoid burning 16.2 million tons of coal, preventing the release of 39 million tons of CO_2.

AEP owns and operates 16 hydroelectric and one pumped storage plant. These plants, which operate on six rivers, generate more than 1 million MWh of mostly emissions-free electricity each year and are important to the diversity of our overall fuel portfolio.

Our View on Emissions Offsets

AEP believes that verifiable offsets must be part of any climate legislation. AEP is a founding member of the Coalition for Emission Reduction Projects, which seeks to educate policymakers and the general public about the benefits of using offsets to meet compliance obligations under a federal GHG regulatory program. Forestry must play a major role if we are to have any chance to stabilize the atmosphere at a level sufficient to avoid dangerous climate change. To ensure forestry offsets are fully included in domestic and international climate policy, AEP joined with conservation groups and other energy companies to develop The Forest Carbon Principles. Since 1944, AEP has planted 63 million trees in the United States; we also have invested in reforestation and forest conservation projects in Belize, Bolivia, Brazil and Guatemala.

Supply-side

Duke Energy's supply-side carbon strategy begins with the premise that we need a holistic approach to both reduce our greenhouse gas emissions and provide the capacity necessary to meet the current and anticipated energy needs of our customers.

Duke is currently building two new advanced coal plants? One supercritical, the other integrated gasification combined cycle? and has begun the long regulatory process necessary to build a new nuclear power station in South Carolina. We are adding two 620-megawatt combined cycle natural gas plants at existing sites in North Carolina. Once they are in service, we will retire 250 megawatts of older coal-fired units. This figure represents part of the 1,000 megawatts of older coal plants we plan to retire by 2012. The company also has an active and growing renewable energy business.

Our renewable energy efforts in North Carolina center around a $50 million rooftop solar power generation program. We purchase wind energy in Indiana and our own wind power business now has 733 megawatts in operation at 7 U.S. wind farms. In 2009 alone, we added more than 360 megawatts of wind power to our commercial portfolio.

We are joint venture partners with AREVA in a biomass energy business and our first project will be completed in 2010.

Duke Energy has teamed with China-based ENN Group to build commercial solar power projects in the U.S. Our IGCC coal facility in Edwardsport, Indiana is being designed with the expectation that carbon capture and storage technology will be installed within the first five years of operation, subject to approval by state regulators.

Demand-side

Our demand-side strategy is focused on energy efficiency. Both deliveries of what we call "the fifth fuel" to the customer and reform of the regulatory structure in the U.S. Our "save-a-watt" regulatory plan, which has been approved in some of our jurisdictions, changes the traditional

regulatory paradigm which currently offers incentives to utility companies only for new construction and not for delivery of energy efficiency. We're investing heavily in smart grid technologies that enable two-way digital communication throughout our system. Smart grid will help boost efficiency and reliability, while enhancing convenience for customers. When combined with a variety of energy efficiency offerings, smart grid technologies will strengthen our ability to help customers use energy efficiently, save money and reduce our collective impact on the environment.

Research & Development

R&D plays a key role in defining and implementing the Group's sustainable development strategy. Its research programs are designed around three objectives.

1. Develop new, eco-efficient and low-carbon technologies for the benefit of customers: smart meters, renewable energy integration in homes (particularly high-temperature heat pumps and solar technologies), electric and rechargeable hybrid vehicle systems.
2. Help keep carbon emissions from the electricity generation facilities as low as possible by optimizing the useful life of nuclear and hydro plants and working toward the industrial development of renewable energies and other low-carbon technologies like Generation-IV nuclear and carbon capture and storage.
3. Foster the development of smart electricity grids capable of integrating intermittent renewable energies, while developing electricity storage solutions to reduce reliance on peak-load generation, especially for island energy systems.

In addition, EDF R&D organizes its long-term research around 12 Challenges, a large portion of which relate to sustainable development: in 2008, close to €100 million of the R&D budget was allocated to environmental R&D projects.

Supply-side

Low-carbon solutions first

The EDF Group fully intends to maintain its position as the European energy company that emits the least CO2 per kWh generated. EDF has committed to reducing absolute emissions of CO2 by 30% in continental France for the period 1990 to 2020, and by 20% in Corsica and the overseas departments for the period between 2006 and 2020.

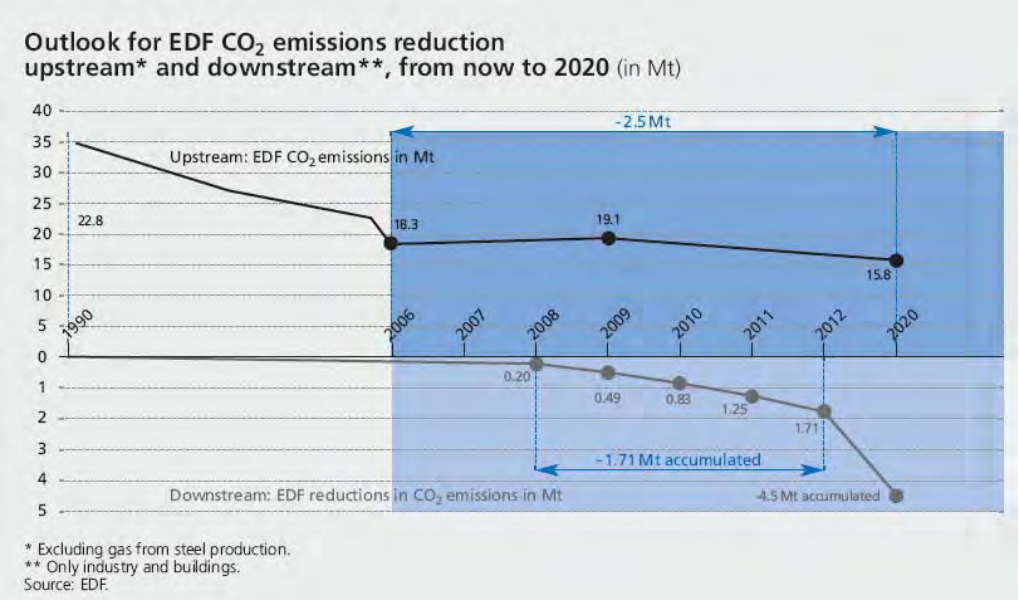
ACTIONS BY EDF'S SUBSIDIARIES:

o In the United Kingdom, to reduce its CO2 emissions (252.7 g/kWh), EDF Energy is

modernizing its fossil-fired plants, building improved-output CCGT plants and investing in wind power. The company is part of the ETI, which brings together State representatives and industrial players in an effort to reduce greenhouse gas emissions by 80% from now to 2050. The acquisition of British Energy, at the end of 2008, the UK's leading producer of low-carbon electricity with a nuclear fleet of 8.7 GWe, profoundly alters the Group's profile in the UK, where EDF is planning to build four EPRs.

- In Germany, EnBW is investing in an RDK8 supercritical coal-fired plant (900 MW) as well as in hydro and wind power. Despite the shutdown of the Obrigheim nuclear plant, the company is also maintaining its intention to keep its CO2 emissions (229.2 g/kWh) below the German average (404 g/kWh).
- In Italy, Edison has just finished construction on over 7,000 MW of CCGT capacity with Edipower, is about to bring on stream the country's largest regasification terminal, and is increasing investment in renewables.
- The Carbon Fund run by EDF Trading was created in 2006 to help EDF Group companies consolidate their strategies for CO2 coverage. This fund has a purchase capacity of approximately €300 million and is one of the major players on the Clean Development Mechanism market.

EDF's average CO2 emissions worldwide : 133,1g/KWh.
EDF's average CO2 emissions in France : 38,1g/KWh[1].



[1] Average electricity-related CO2 emissions in EU27: 354g/KWh.

Developing nuclear: large-scale CO2-free generation

In France, EDF is building its first EPR nuclear unit at Flamanville (Manche). In the UK, EDF signed agreements with the British authorities to the effect that four EPRs can be built on British Energy sites. The licensing procedure with the British safety authority has already begun. In the USA: EDF and Constellation Energy created the joint venture UNE in 2007 to build, hold and operate EPR units. The licensing application for construction of a unit at Calver Cliffs was registered with the NRC. In China: EDF signed an agreement for the creation of the TNPC with CGNPC5, a long time partner. TNPC will build two EPR units at Taishan in Guangdong, which it will operate for a period of 50 years. The earthworks began in 2008, units will be brought on line beginning in 2013.

Investing in renewable energy

A. Hydro: the power of a renewable

EDF operates a 23.16 GW hydro fleet, of which 20.4 GW is in France and 3.47 GW in Germany. These facilities supply 52.98 TWh (8.7% of overall generation) of which 45.9 TWh is in France (4.8 TWh more than 2007). In France, EDF's SuPerHydro program for hydro safety and performance, invested €560 million on routine maintenance costs between 2007 and 2011. The Group is bolstering its hydro assets in France thanks to the Gavet project (90 MW), which will replace six aging units with a complex on the Romanche river, and by modernizing the Rhineland stations of Kembs, Gambsheim and Iffezheim or investing in small hydro plants such as those found at Brisach (Rhine). In Corsica, it is building a 55MW plant at Rizzanese.

In Laos, EDF is the main shareholder (35%) in Nam Theun 2 Power Company, for the construction and operation of a 1,070 MW hydro dam, fully filled in 2008 and to be brought on stream for commercial operations by the end of 2009.

ACTIONS BY OUR SUBSIDIARIES:

In Germany, EnBW is taking the capacity at Rheinfelden hydro-plant from 26 to 100 MW and adding another 68 MW to its existing generation capacity. In Turkey, Edison and the Sanko Group created a joint venture to invest in hydro projects.

B. Wind power, EDF EN's development driver

EDF's subsidiary Energies Nouvelles (EDF EN) brought several major windfarms on stream: 352 MW in Portugal (Ventominho and Arada); 200 MW in France (notably in Villesèque (51 MW), Chemin d'Ablis (52 MW) and Salles-Curan (87 MW)); 70 MW in Italy (Campidano); 40 MW in the UK (Bicker and Walkway); 38MW in Greece. In Belgium, the company has a share in the offshore project C-Power (300 MW), the first 30 MW unit of which has already been completed. In the USA, the company built the Waspi North windfarm (100.5 MW) for its own account, and signed with American electricity companies for the delivery of 250 MW of farms for the period 2009-2011. Four contracts for the operation and maintenance of 2,100 MW were also signed. Other EDF Group companies also invested in wind power. In Germany, EnBW is developing four windfarms on the North and Baltic seas (1,200 MW). In Italy, Edison will add 800 MW of wind capacity to its existing 300 MW by 2014. In the UK, EDF Energy, which operates wind turbines in the north-east, is going to build 90 MW of capacity offshore in Teesside. In order to bring its renewable energy capacity up to 1,000 MW within the decade, EDF Energy also joined forces with EDF EN to create, in June 2008, a 50/50 joint venture: EDF Energy Renewables.

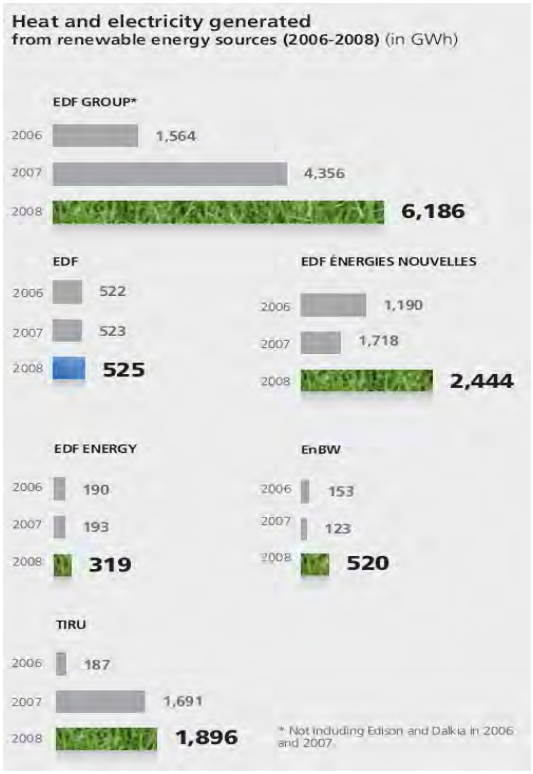
C. Solar shining bright

EDF EN is planning to invest €335 million in high output solar plants. In 2008, the company connected 20 MWp to networks in the United States, Italy, Spain and in France, where the Narbonne unit, the country's largest (7 MWp), has already been inaugurated. 29 MWp of additional projects are under construction and over 2,000 MWp are under development. In January 2009, EDF EN began construction in Reunion Island of the largest French solar complex (15 MWp), which should eliminate 13,000 tonnes of CO2 per year.

D. Biomass, a vital resource

In France, EDF, through EDF Energies Nouvelles, Dalkia (held jointly with Veolia Environnement), and TIRU, are developing the use of biomass (wood and waste) to supply fuel boilers. In 2008, TIRU's 21 units generated 248 GWh of electricity and 11,077 terajoules from 4.1 million tonnes of waste. TIRU inaugurated Isseane, a waste recovery complex which includes a sorting center and an energy unit that heats the homes of 182,000 urban residents in the Paris area. In Germany, at Burgrieden in 2008, biogas was integrated for the first time onto the network run by Erdgas Südwest, an EnBW affiliate. This pilot project aims to secure electricity supply at foreseeable cost and to broaden prospects for agriculture. In Poland, following ERSA,

Kogeneracja and ECK, EC Wybrzeze introduced two coal-biomass co-combustion facilities that are expected to reduce CO2 emissions by 155,000 tonnes per year. In 2008, the Group's Polish plants generated 416 GWh from biomass (up from 176 GWh in 2007).



Demand side

Responding to customer and social expectations

In France, the energy certificate system requires EDF to help its customers save 29.8 TWh of total accumulated energy use between mid-2006 and mid- 2009, that is 55% of the overall target for France. Customers, confronted with prices that tend to increase, also expect energy ecoefficient solutions. The ability to meet such expectations can provide a competitive edge.

The EDF Group is committed to eco-efficiency, which aims at finding the most effective and economically competitive solutions for managing energy consumption and limiting greenhouse gas emissions.

Customer offers in France: from services to turnkey solutions

In France, EDF helps its customers launch energy eco-efficient projects and works with them to develop projects in three main areas: insulation of housing and office and commercial buildings; installation of energy-efficient equipment or use of renewables; and improvement of industrial procedures. Offers range from advisory services to the works themselves, for both residential and business customers. To deliver these offers EDF works with its affiliates and subsidiaries as well as 5,300 partner installers.

EDF markets solutions focused on photovoltaic and heat pumps, which are installed and serviced by EDF Energies Réparties, a joint EDF and EDF Energie Nouvelles subsidiary. For business customers and local development markets, EDF Optimal Solutions operates as a service integrator, offering a dedicated advisor, low-energy, lowcarbon equipment with on-site installation, maintenance and operating contracts, adapted financing, guaranteed results and remote services.

To develop professional skills in these new fields, EDF is participating alongside the French Agency for Environment and Energy Management (Agence de l'environnement et de la maîtrise de l'énergie – Ademe) and professional federations in a training program for construction professionals and employees in the construction sector.

Sales and marketing offers across Europe

EDF Group companies throughout Europe are developing energy eco-efficiency offers adapted to the regulatory framework of the country in which they are active:

- In the United Kingdom, EDF Energy launched the Climate Balance for Business scheme, which allows business customers to help reduce CO2 by financing renewable energy projects by making a contribution of 0.4 pence per kWh consumed. The Green Energy Fund, which channels these contributions, has already invested £2.7 million in renewable energy programs.
- In Germany, EnBW has launched its Meregio project (minimal emissions regions) with Karlsruhe University and other industrial partners. As part of the Federal Economy Ministry's E-Energy aid program, this project aims by 2013 to create a model region endowed with an intelligent electrical supply network that links decentralized producers,

communicating terminals and both fixed and mobile energy storage devices. In line with the project, EnBW is marketing its smart meter, to be installed for 1,000 end customers in the pilot region beginning in 2009. This meter serves as the basis for new energy-efficient products and remote services. Residential customers will be able to monitor their consumption, record it for the future, receive advice adapted to their specific needs, and overall better manage their consumption.

The car of the future

A partnership concluded with Toyota in 2007 for the trial of the rechargeable hybrid car Prius is ongoing and has even been extended to the UK, where EDF Energy is testing a vehicle. In 2008, EDF established two new partnerships, one with Renault-Nissan and the other with PSA Peugeot-Citroën, to develop electric and rechargeable hybrid vehicles.

New products

A. High-performance heat pump

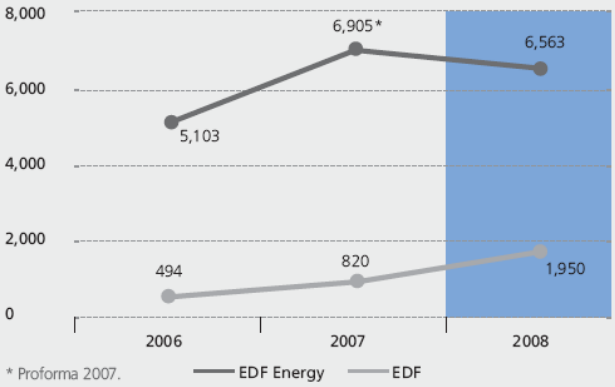
A high-performance heat pump, developed by EDF and German industrial partner Stiebel Eltron, was marketed by EDF ENR. Sleek and compact, the heat pump is easy to connect to existing installations. EDF offers remote monitoring and maintenance. This heat pump is the perfect alternative to replace a residential customer's oil furnace. The potential market has been evaluated at three million customers.

B. Fuel cells

EnBW is bolstering its fuel cell test program for residential customers: 222 new devices are expected to be installed in Bade- Wurtemberg by 2012 as part of the federal government's flagship project Callux. EnBW is investing €10.5 million in the program. Since 2001, the company has installed 30 fuel cells for its customers and partners.

Sales of green electricity to end customers (in GWh)

This refers to sales of electricity that have been certified (REC certificate) by an independent regulator to be of renewable origin, excluding pumping energy for electricity from hydro facilities.



According to its environmental policy, Enel is constantly committed to adopt and develop low-carbon innovative technologies for enhancing the environmental performances of its power plants and grids.

Enel best practices include:

Supply-side management

Approximately 50% of Enel power generation fleet is composed by “carbon free” sources such as renewables and nuclear.

Renewables

At Enel, 30% of the total installed capacity (33.000 MW) is provided with renewables sources. The portfolio comprises a broad variety of technologies in Europe and America and the renewables currently used are hydroelectric, wind, geothermal resources, solar and biomass.

In 2008 Enel set up Enel Green Power (EGP), a Company fully dedicated to the development of renewable capacity worldwide, which is the second largest European player in renewables with a production of more than 17 TWh and installed capacity of 4500 MW.

EGP has a leading position in geothermal sector: the 12 MW “Lagoni Rossi” plant in Larderello, that just entered into service is an example of the Company’s cutting-edge know how in this field.

The project, which was implemented by the company's in-house engineering staff, boasts innovative features that place the plant at the forefront of technological development in its category. The plant is also equipped with an innovative system for remote monitoring and diagnostics, which enables full remote control of the unit. The plant also complies with the highest environmental and landscape impact standards.

Nuclear

Enel has an overall electrical capacity from nuclear of about 5.300 MW and recently launched a nuclear program for Italy. The regulatory process to build 4 EPR plants in Italy, each with a capacity of 1,600 MW has been recently begun.

Investments in the last years have been undertaken in Slovakia, Spain, Romania and Russia., Enel will also consolidate its presence in France by participating with EDF in the construction of an EPR plant in Flamanville Normandy).

Clean Coal

Last generation ultra supercritical steam boilers along with major improvements of the thermal cycle enabled “Torre Valdaliga” power plant (1980 MW) to achieve an efficiency of up to 45%. The plant is also provided with high efficiency systems for abatement of emissions, namely particulate, sulfur and nitrogen oxides. Enel is also involved in international project (i.e. COMPTES 700) to study advanced components for high efficiency coal plant by which it will be possible to reach up to 50% efficiency target.

Research & Development

Carbon Capture Storage

Enel is carrying out a variety of R&D projects on CCS technologies, the most important of which is on “Post-combustion CO2 capture and geological storage”.

The goal of this Post-combustion CCS project is to demonstrate the full scale industrial application of CO2 capture and geological storage in the power sector. It consists in the retrofit of one large size coal fired unit with CO2 capture equipment and CO2 underground storage starting by 2015. In order to test on a smaller scale this process, a CCS pilot plant is going to be operational in Brindisi. and it will be part of a full scale project that will be carried out in the new coal power plant in Porto Tolle. The Porto Tolle demo is one of the most advanced project in the world and has been awarded with part of the funds provided by the European Plan for Recovery (EEPR). Another project carried out through Endesa was financed by EEPR (La Compostilla) aimed at testing the oxy-combustion technology applied to a coal power plant.

The Group is also testing systems for pre-combustion technology and combined use of the hydrogen produced in the gasification of coal. The “Fusina” power plant (Italy, Venice), a small size combined cycle of 12 MWe capacity fed by pure hydrogen produced in a close chemical plant and carried into Fusina through a 3 Km pipeline, is designed to use the hydrogen obtained from the gasification of coal associated with CO2 capture in the next years.

Smart Grids

Enel has strongly contributed to the Technology Action Plan on Smart Grid launched by the Major Economies Forum in July 2009 led by Italy and South Korea. The plan has been presented at UNFCCC COP15 in Copenhagen by the US Energy Minister Steve Chu.

ENEL has also a leading role under the EU co-funded research project “Active Distribution network with full integration of Demand and distributed energy RESource, ADDRESS (2008-2012). In this context, Enel is in charge of developing functional specifications, strategies, new functions and algorithms for the DSO, active grid safe and reliable operation, simplified models for the TSO as well as developing prototypes and test them individually in laboratories.

The solutions proposed by the ADDRESS project will be validated in 3 complementary test sites with different geographical and demographic characteristics and different infrastructure mixes. Sites will be selected in Spain, Italy and France to meet these diversity requirements and to provide a representative realization of the ADDRESS architecture.

Plug-in electric vehicles

Enel is developing a pilot project (“E-mobility Italy”) to support the diffusion of electric cars. A first agreement has been already signed with Daimler Mercedes, to launch by 2010 a pilot test with 100 EV in 3 cities (Rome, Milan and Pisa). Enel is in charge of developing an intelligent recharge infrastructure based on the technical concept of ENEL’s digital meter and network communication system. The cars are now in distribution and the next step will be to install recharging facilities at home for any selected customer. In parallel Enel has started the authorization procedures to put in place 400 recharging stations, fully manufactured with Enel technology, inside the city areas (150 points in Rome). A first series of recharging stations will start working from September 2010.

Innovative solar

The “Archimede Project” (Italy, Sicily) is the first integration, worldwide, of a gas combined cycle and a solar thermodynamic power plant.

The energy obtained concentrating the sun's direct rays by means of 54 mirrors (around 31,000 m2) is collected using a salt-based fluid, and is made available in the form of high temperature heat (550°C) any time of the day, avoiding the typical discontinuity of renewable sources. The yielded thermal energy will then be used to produce high temperature and high pressure steam, which can be pumped into the combined cycle steam turbine.

Enel is also committed to develop high-tech photovoltaic panels in partnership with national and international leaders in the sector (STMicrolectronics and Sharp).

Demand-side management

In Italy Enel has replaced 30 million analogical meters with the most recent digital ones (smart meters) and Endesa has planned to do the same in Spain for 13 millions users by 2014. The Digital Meter is a technologically innovative system that monitors and manages remotely the contractual relationship with customers. The system uses a two-way communication network between the electronic meters installed by customers and the company’s customer management centre. The Digital Meter enabled Enel to design new electricity price systems based on the time of day the energy is consumed and customers to calculate their bill based on consumption recorded and regularly updated. This way it is possible to incentive customers to use energy when the price is lower and energy is available on the network, enacting the “demand management”, i.e. an overall improvement of the efficiency of the system, both on the supply and demand side.

Technology transfer

A. CDM

Since 2004 Enel has been active in implementing greenhouse gases abatements projects under CDM. These projects enable the Group to optimize the costs associated with the emission

reduction targets to be met under the European Emission Trading Scheme (EU-ETS). The portfolio of projects is estimated to have the potential of avoiding about 196 million ton of CO2 from 2008 to 2020 (total volume including projects in pipeline).

B. MoU with the Chinese Government:

On May 2008 Enel signed a Memorandum of Understanding (MoU) on Cooperation on Clean Coal Technologies aimed at establishing a constructive dialogue on the transfer and development of Clean Coal Technologies, including Carbon Capture and Storage and Ultra Super Critical Coal Fired Power Plants technologies.

Enel, the Italian Ministry for the environment, land and sea and Ministry of science and technology of China will jointly design and implement an activity plan for a cooperation on Pilot scale post-combustion CO2 capture and preliminary feasibility study on application of CCS to coal fired power plants and subsequent injection for enhanced oil recovery.

Hydro-Québec and its contribution to reduce greenhouse gas emissions

Supply-side

Renewable Energy

Hydro-Québec is the largest electricity company in Canada, and one of the world's largest producers of hydropower. 97% of its generation comes from renewable energy. Among others, the company has 59 hydroelectric generating stations for an installed capacity of 34,118 MW (2008). Hydroelectricity plays a key environmental role, both in Québec and throughout northeastern North America. Since 2001, this has meant more than 30 Mt of greenhouse gas (GHG) emissions avoided on this continent as a result of our export sales.

Accordingly, the company will continue to develop Québec's hydropower potential. An additional 4,000 MW will increase Hydro-Québec's generating capacity in the near future: 1,000 MW to be completed by 2013, 1,500 MW under construction for a complete commissioning by 2020, and 1,500 MW with other potential projects which are under draft design.

Hydro-Québec also makes use of other green, renewable energies, particularly wind power, which is a logical complement to hydroelectricity. An objective of 3,500 MW of wind power should be in service by 2015 as a result of Hydro-Québec Distribution's calls for tenders. Presently, 447 MW are in service, 2,398 MW under contract and to be developed, and 500 MW is in a call for tenders process.

In addition, two other calls were launched in 2009: a call fo tenders for the purchase of energy produced by biomass cogeneration, resulting in eight bids for a total of 60.7 MW, and a power purchase program to support the development of small hydroelectric generating projects for the benefit of Québec's regions for a total installed capacity of 150 MW.

Furthermore, Hydro-Québec is also looking the opportunity to evaluate the feasibility of carrying out projects in northern Québec designed to develop emerging renewable energies such as hydrokinetic power, which uses energy from tides or underwater currents.

Demand Side

Energy efficiency

To improve the smart use of electricity, Hydro-Québec has set an ambitious goal: to achieve 8 TWh in energy savings by 2013, with a target of 11 TWh by 2015 covering all its markets, among others electric heating.

To realize these energy savings, the company will continue to build on its energy efficiency programs while improving the system's energy performance, among other, via the CATVAR project. This project, which is slated for 2010-2015, is designed to improve the system's energy performance through closer voltage regulation on certain lines. It could generate close to 2 TWh in energy saving by 2015.

Geothermy

The company is also supporting the development of geothermal energy. Since 2007, Hydro-Québec Distribution has been offering financial assistance for the installation of geothermal systems in new and existing residential buildings heated with electricity. These systems are also covered under energy efficiency programs for business and commercial customers. Hydro-Québec Distribution will look at the possibility of offering assistance adapted to multiple-unit residential buildings. In addition, the division will support pilot projects to test new types of facilities, such as community geothermal systems, which use a common well for several residences. If the results are conclusive, these systems will be included in the energy efficiency programs of the company.

Transportation Electrification

In 2007, transportation was responsible for 42% (36 Mt) of all GHG emissions in Québec. By contrast, power generation accounted for only 2.7%—a remarkable performance that is attributable to hydroelectricity. If it were used to power electric vehicles, this clean, renewable energy could replace a substantial portion of the fossil fuel used on our roads. The widespread use of electric vehicles—both for public and private transport—would therefore have a major impact on Québec’s environmental track record.

Thus, Hydro-Québec has decided to be active in electric transportation and to focus its efforts in four areas:

- Financial support for the development of electrical infrastructure for public transit
  - Development and marketing of advanced technologies, in particular:
  - TM4's MΦtive™ series electric motors
- New battery materials, including lithium-iron-phosphate
- Test-driving of plug-in vehicles and experimenting with their integration into the power grid
- Planning of support infrastructure for vehicle charging (home and public charge spots).

Kansai is proud to announce that it is taking a more active role in the creation of a sustainable and low-carbon-emissions society through its newly adopted Kansai e-ECO Strategy. The new strategy, which encompasses the concepts of a low-carbon community and Kansai's Smart Grid, is a revision of its former New ERA Strategy, which has been addressing global warming from the perspective of both supply and demand.

Under this new strategy, Kansai will systematically pursue three goals: (1) low-carbon electricity generation based on nuclear power, (2) high energy efficiency, low costs and CO2 for customers and community through the wider deployment of efficient systems such as heat pumps and electric cars, and (3) construction of Kansai's Smart Grid to achieve both (1) and (2).

Low-carbon power generation

In addition to the effective utilization of existing nuclear plants, new and replacement nuclear capabilities will form the core of the future generation mix. Renewable energy will also be actively deployed, including the popularization of photovoltaic generation, maintenance and expansion of hydro power, and introduction of new energy sources. Higher efficiency of thermal power generation and supply/demand management capability will be another component of the strategy.

Nuclear

Kansai will seek construction of new and replacement facilities, along with the maintenance and improvement of capacity utilization through safe, steady, and more effective operation of existing plants.

Hydro

The existing hydro power base will be maintained. Kansai will review its hydro power resources to identify economically feasible projects for development potential, including greater outputs from refurbishment.

New Energy Sources

Kansai will retain its policy of developing and deploying new energy sources where economically feasible. Kansai will also assist customers in their growing adoption of photovoltaic power and accommodate their excess electricity into the grid. In a word, Kansai intends to work together with customers to lower carbon emissions from power generation.

Thermal

While increasing the ratio of non-fossil fuel, Kansai will reduce CO2 emissions through improved thermal efficiency thanks to plant renewals, such as the combined cycle generation installed in its Himeji No. 2 Power Station.

Supply/Demand-side Management

Against the backdrop of the increased presence of nuclear power, for which it is difficult to manage output to accommodate demand, and of photovoltaic power, which is marked by variable output, Kansai will work to secure supply/demand management capabilities and backup power for its base capacity. From this viewpoint, Kansai will retain its thermal and pumped/storage hydro power resources to meet demand for electricity, while paying close attention to issues relating to the aging of such facilities.

Supporting customers and community for reduced energy consumption, low costs and CO2 emissions

As the concept of a low-carbon society spreads, it is anticipated that customers and communities will be increasingly interested in energy efficiency, low costs and reduced CO2 emissions. Kansai's ultimate goals are "improved customer satisfaction" and "low carbon society" through the introduction of highly efficient appliances combined with low-carbon electricity. One example is heat pumps that efficiently utilize the thermal energy of air heated by the sun.

The key to this is to educate every customer and convince them of the advantages electricity offers in energy efficiency, low costs and CO2 reduction—in addition to the fact that it is a safe, secure, clean, and convenient form of energy. Customers will create "new demand" by choosing electricity for their energy needs, which will lead to a gradual but steady increase in the demand

for power.

Even moderate growth in demand will assist Kansai to secure sufficient resources to continue working toward its goal of lower carbon emissions, such as increasing the ratio of non-fossil fuels and implementing capital investment programs for aging facilities. Resources are needed to stabilize the grid as photovoltaic generation diffuses and expands. These projects must remain on-going in the face of a possible downturn of total energy demand thanks to accelerated improvements of energy efficiency or a declining population.

Thus Kansai foresees a win-win cycle: customer satisfaction with electricity as their main energy source will lead to further reductions in CO2 emissions and improvements in the quality of electrical power. Ultimately, this trend can decrease the total CO2 emissions of the community in a sustainable manner over the long-term. Kansai is committed to undertaking the challenge of implementing such a positive cycle over the entire community.

Kansai's Smart Grid

It goes without saying that electrical distribution networks connect low-carbon power sources with electricity-based communities that aspire to low-carbon emissions. Low-carbon power sources remain without value unless they are tied into networks that link them to consumers. This is especially true for new energy sources, such as photovoltaic generation, which typically have variable output: they can’t be reliable power sources for consumers until they are connected to a grid that includes other power sources such as thermal or pumped/storage hydro that will act to buffer supply/demand fluctuations.

A low-carbon society requires a great amount of work to prepare and maintain. It is built on the basic premise that power management systems for supply and demand and network facilities for transmission and distribution will operate safely and steadily with the necessary maintenance and updating. It then requires the creation of electricity distribution networks that are capable of absorbing a substantial amount of power from new energy sources that are fundamentally variable in output, such as photovoltaic.

It is expected that the need to refurbish and replace aging power distribution equipment and systems will continue to grow. Kansai will be engaged in both short-term and long-term planning of facility upgrading for standardization and orderly scheduling. Kanasi will maintain its reputation

for reliability by appropriate upgrading its distribution systems.

The term “smart grid” means different things to different people. The smart grid that Kansai envisions (Kansai’s Smart Grid)[2] is a grid “that aims to create a power distribution system of high efficiency, high quality, and high reliability through the application of new technologies in telecommunications and batteries, among other things, for the purpose of a low-carbon society and improved convenience and comfort of customers, without losing the stability of the underlying power grid (quality of electricity such as voltage and frequency)".[3]

It is therefore also of utmost importance for Kansai’s Smart Grid that the power grid from main generation source to consumers or distributed generation sites through transmission and distribution networks is, as hitherto, “optimized as a whole.” The question of stability issues related to concentrated or amassed introduction to the grid of new energy sources such as photovoltaic will have first priority.

In particular, the effect of massive deployment of photovoltaic power generation will be studied proactively, with a focus on data gathering and analyses such as load measurement on distribution networks and collection of daily sunshine data. Demonstration projects will be implemented, and any knowledge gained through these efforts will be made widely available in order to contribute to the improved reliability of Japan’s power supply.

These data and insights will form the basis for Kansai’s research on photovoltaic output prediction systems and frequency management systems using grid batteries, as well as for measures in distribution systems, including sophisticated distribution automation systems (next-generation distribution automation), which will collectively create a new power supply system accommodating new energy sources. Further, Kansai’s new metering system enables the presentation of consumption data in 30-minute increments. This will facilitate improvement of infrastructure to be more efficient and optimized to actual consumption. Kansai’s existing IT infrastructure with communication networks and the advanced metering infrastructure (AMI) with an extensive coverage of the Kansai Region will be a strong facilitator for these endeavors.

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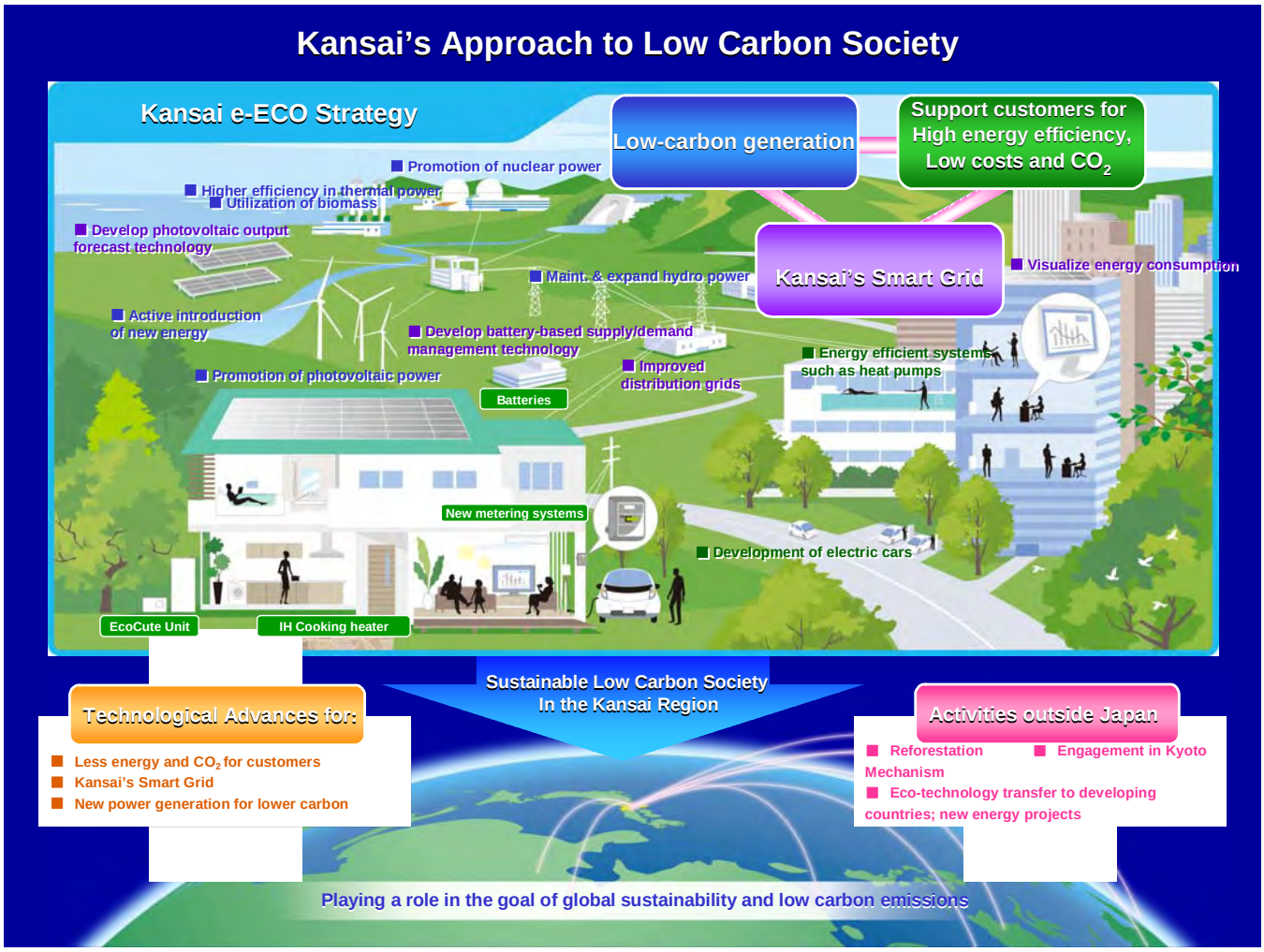
[2] Japan doesn’t face the need to “address increasing demand without an enormous amount of capital investment in transmission and distribution facilities,” which is found in the smart grid concept of the U.S. Kansai will watch closely the development of American smart grids, since their technology may be applicable to improved facility utilization and other aspects.

[3] The Kansai Region has a concentration of photovoltaic panel manufacturers and battery manufacturers. Kansai will work Kansai’s Smart Grid under the collaboration with these manufacturers.

Kansai will also provide support for energy efficiency improvements for customers. With detailed data now available through the advanced metering infrastructure (AMI), one project is the visualization of energy consumption of individual customers. Kansai will explore other service possibilities that capitalize on this feature.



OPG is making the transition to a lower carbon future by investing in hydro and nuclear generation, improving energy efficiency within our generating stations, testing the use of renewable biomass as a replacement for coal in some of our generating stations and expanding our biodiversity efforts. In 2008, 78 per cent of Ontario Power Generation's electricity was produced by our hydroelectric and nuclear plants, sources which are very low greenhouse gas emissions sources. OPG continues to work to increase generation from our hydroelectric and nuclear plants and reduce CO2 emissions from the remainder of our generating plants.

The Best Practices in progress or under development by OPG to reduce or mitigate CO2 emissions include the following.

Hydroelectric Development

OPG is constructing a new tunnel to supply additional water to increase the annual electricity production by 1.6 billion kWh from the Niagara Fall's Sir Adam Beck plant.

OPG is proceeding with a project to expand the hydroelectric generating capacity on the Lower Mattagami River by replacing and upgrading older generating stations. The project will provide an additional 450 MW of new hydroelectric capacity.

OPG also proposes, subject to environmental approvals, to redevelop the following hydroelectric generating stations: the Hound Chute Generating Station located on the Lower Montreal River, expanding generating capacity from 3.6 MW to 10.2 MW; two new generating stations on the Little Jackfish River to deliver an additional 100 MW capacity; and three small stations on the Upper Mattagami River to deliver 35 MW capacity.

New Nuclear Power

OPG was selected to be the operator of a new nuclear facility (up to 3600MW) at Darlington, Ontario. However, the Government of Ontario has suspended the competitive process to procure

the two nuclear reactors planned for the Darlington site. Submissions were received from AREVA NP, Atomic Energy of Canada Limited and Westinghouse Electric Company; however, only the submission from AECL was compliant with the terms of the process and the objectives of the Government. Concern about pricing and uncertainty regarding AECL's future prevented Ontario from continuing with the procurement at this time. OPG continues prepare the Environmental Impact Statement required for plant construction to proceed.

Existing Nuclear Refurbishment

OPG continues to evaluate a project to refurbish and extend the operating life of nuclear units at the Pickering B site.

Biomass Conversion

OPG is targeting 2012 as the year it will begin using renewable biomass as a replacement fuel for coal in some of its electricity generating units. OPG is mandated by regulation to cease the use of coal by the end of 2014.

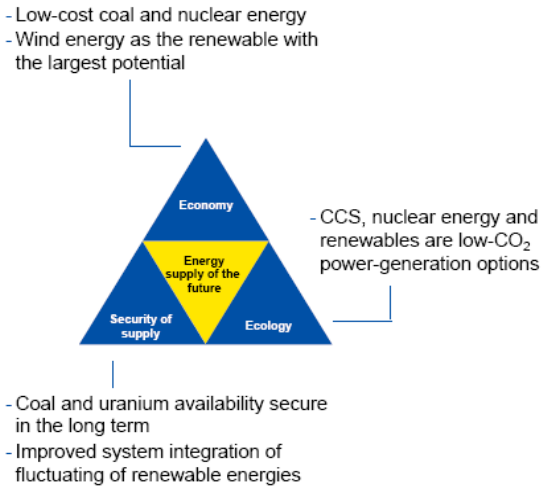
Biodiversity Programs

In 2008 alone, OPG planted more than 408,000 trees through its various partners, bringing our total plantings to 3.3 million trees on more than 1500 hectares of ecologically significant lands in southern Ontario. This initiative is a major contribution to OPG's Biodiversity Management Program and Greenhouse Gas Management Strategy. The afforestation of ecologically strategic locations will provide habitat for threatened species that are especially at risk because of the loss and fragmentation of forest habitat in southern Ontario. Plantings are targeted to expand key forested areas and connect woodland patches. Buffer plantings along riparian habitats have the added bonus of stabilizing soils and improving water quality. This cumulative effort will also address both climate change mitigation and adaptation imperatives by sequestering carbon and enhancing the resiliency of our woodland ecosystems to cope with the effects of climate change. In recognition of OPG’s Biodiversity Program, the Baltimore-based Wildlife Habitat Council awarded OPG its 2009 CEO Award. The CEO award recognizes a corporation which has a history of striving for excellence in biodiversity ***C***onservation, ***E***ducation and ***O***utreach.

Climate protection, economic efficiency and security of supply
Best practices taken by RWE

All efficiency potentials available in generation, consumption and transport must be exploited to achieve the long-term climate protection target in Germany to reduce CO2 emissions from power generation by 2050 by 80% (compared to 1990). For the power industry, this would require changes mainly in three areas:

- Efficiency improvement of all coal-fired power plants including CCS application
- Lifetime extension and later replacement of nuclear power plants
- Tripling of wind power capacity



Supply side

RWE's generation portfolio is dominated by lignite and hard-coal-fired power plants, which account for about 55 % of the total power plant capacity. The efficient and environment friendly use of coal to generate electricity is key as coal will remain one of the most important primary energies for many years to come. To make coal more acceptable in the long term, we intend to

make it as climate-compatible as possible. Our mid-term goal is to slash our carbon emissions by more than 30 % by 2015 compared to 2008. We will do this by modernising our power plants, developing and implementing clean coal technologies, participating in CDM and JI projects, increasing our use of renewables and by continuing the use of nuclear power.

Fossil-fired power plant renewal

By 2012, we will have invested some € 10 billion in building of new plants and retrofitting of existing ones. Our oldest lignite plants with an efficiency of little more than 30 % are to be replaced by the more efficient lignite-fired units with efficiency rates up to 43%. New plant concepts for hard coal-fired plants (Combined Cycle Gas Turbine, CCGT) will operate at a rate above 58 %. With our news plants we will decrease specific CO2 emissions by 25-30 % compared to the existing ones.

Advances in clean coal technology

A promising concept to make coal-fired power plants more climate-friendly is the integrated-gasification-combined-cycle plant design (IGCC) with CO2 capture and storage (CCS). The world's first industrial scale (450 MW) IGCC power plant with CCS is to be built in Hürth near Cologne, Germany. CO2 separation prior to combustion will require developing a completely new plant concept with a CO2 flue-gas scrubbing process attached. The scrubbing process can also be used at existing power plants. Together with BASF AG and the Linde Group, we constructed a pilot scrubber at our Niederaußerm plant, which came on stream in 2009. Flue-gas scrubbing is expected to be ready for retrofitting existing plants by 2020. In that case, we would be able to remove more than 90 percent of the CO2 contained in the flue gases and stor it underground instead. To advance the development of this technology, RWE npower is operating a corresponding pilot plant at Didcot, UK; a second larger one is being built at Aberthaw, UK. We are also involved in trials of two pilot plants for CO2 sequestration at hard coal power plants in the USA. Success of the ongoing CCS development work will depend on the availability of suitable CO2 underground storage sites. RWE started to explore various options in Europe.

Other research and development

- In order to improve the efficiency of our lignite-fired plants even further (from 43 to more than 47 %) we are presently testing a lignite pre-drying process using the fluidised-bed concept.
- A research project called REAplus aims to cut flue gas contents of sulphur dioxide and dust to around 10 % of today's averages to make CO2 flue-gas scrubbing more effective.
- The latest addition to our research activities is an algae-cultivation unit which went into operation in 2008. This binds CO2 of flue gases with the help of fast-growing algae which is a biomass and can be used as an energy source.
- Due to the expansion of renewable energies in power generation the amount of power will increase which is not generated following actual demand. This development requires the construction of energy storage systems. Together with General Electric we are presently reviewing the feasibility of an adiabatic compressed air storage. Construction of a demonstration plant is expected for 2012 or later.

Stepping up renewables

Additional 4,500 MW of renewable generating capacity will be either operational or at least under construction by 2012, most of it in the form of wind turbines. Examples for future projects:

- Four cogen plants for generating electricity from biomass are currently under construction or in planning. The largest of these is that planned for Stallingborough, UK, which if built will have an output of 65 MW and will run mainly on waste timber.
- Although the scope for enlarging land-based hydroelectric capacity is very limited in Germany, we intend to use the available potential. Our largest project at present is the plant at Albbruck-Dogern on the Rhine, the capacity of which is increased by 24 MW.
- RWE Innogy is planning to build a 10.5 MW wave power plant off the coasts of Scotland and Wales. Commissioning is expected for 2012.
- Other technologies developed by RWE Innogy: geothermal energy, decentralized wind power, biomass.
- So-called virtual power plants permit the coordinated use and marketing of decentralised and renewable capacity. The first virtual power plant run by Siemens Energy and RWE Energy commenced operation in October 2008, when nine hydroelectric plants with a total capacity of 8,6 MW were linked.

CDM and JI

We are presently participating in more than 130 CDM and JI projects. RWE is allowed to use the emissions certificates generated by these projects to cover up to 100 million tonnes of our own carbon emissions. By the end of 2008, we had contractually guaranteed CDM/JI certificates for some 70 million t of emissions. Taking into account the project risks, we expect to obtain certificates for at least 40 million tonnes of carbon emissions. One example of a CDM project is the energy-efficiency project initiated in India by RWE Power and the light bulb manufacturer OSRAM in February 2008. This will replace the conventional light bulbs still in use in some 700,000 households in the Visakhapatnam region with energy-saving light bulbs, thus cutting the carbon emissions from domestic lighting by some 30,000 t/a. As energy-saving light bulbs are cheaper to run, the project will also help to lower domestic electricity bills and to combat poverty.

Nuclear power

In spite of political concerns in Germany, we are basically in favour of nuclear power, especially in view of its advantages in respect of climate protection and security of supply. We are therefore involved in the construction of nuclear power plants wherever this is politically accepted and an appropriate legal framework is in place. Safety standards comparable with those required of nuclear power plants in Germany are for us a must in all such ventures. We are presently operating more than 6 MW of nuclear power in Germany and are pursuing nuclear projects in the UK, where we have joint forces with E.ON.

Demand side

For many applications, replacing oil and gas by electricity means to increase security of energy supply and to reduce CO2 emissions. Main areas are space heating and road transportation. Attractive pricing and transparent tariff policy are essential to change the consumption pattern.

RWE promotes high-efficient heating systems like gas boilers, heat pumps and electric heating with heat recovery. The system load resulting from feed-in fluctuations caused by the increasing use of renewable sources may be harmonized in future by applying new electric heating concepts.

E-mobility is on the threshold of becoming competitive. Taking today's primary energy mix in power generation as reference, electric cars emit 20-30 % less CO2 compared to gasoline or diesel-fuelled cars. With innovative batteries, electric cars will perform like conventional cars in near future.

Products for residential and business customers

Our residential customers can choose between various tariffs. Our new "ProKlima Strom 2011" tariff launched in November 2008 combines predictable prices and climate protection. Customers who opt for this tariff profit from prices guaranteed until December 2011 and from electricity which is one third from hydro and two thirds from nuclear power.

Four electricity auctions held for business customers in 2008 saw the sale of 1,575 MW from hard-coal and lignite-fired power plants for delivery in 2009. At the last auction in October 2008, 42 European industrial corporations joined in the bidding and eventually bought the total capacity on offer of nearly 400 MW for delivery next year. The prices fetched were only slightly lower than those being paid on the European Energy Exchange EEX. This result showed clearly, that the trading being done on the European Energy Exchange does indeed reflect market prices.

January 2008 saw us launching a new online information platform as part of our transparency initiative. Here, we publish real-time data on our power generation activities, broken down according to plant, primary energy source and fuel and supplemented with information on disruptions.

Energy-efficiency campaign

RWE has set aside € 150 million for an energy-efficiency campaign. The funds are used to provide information on energy efficiency to customers, to explain the opportunities they have for savings and to implement the required measures jointly. Energy checks for town halls and other municipal buildings in RWE's German sales regions (for which RWE bears up to 85 % of the costs) were added to this bundle of measures in early 2008. In addition, we help municipalities to reduce costs by replacing the streetlights. By the end of 2008, we had already replaced more than 26,000 streetlights; this translates into annual savings of more than 4 million kWh of and 2,200 t CO2. RWE is planning to spend a total of € 4 million on energy-efficient streetlights.

In mid-2008, we started to equip every household (116,000) in the city of Mülheim with a smart electricity meter. These meters provide customers with detailed, up-to-the-minute energy consumption data enabling them to control their power consumption more effectively. RWE will be spending € 30 million on this project in the coming three years.

Environment-friendly mobility

RWE teamed up with Daimler AG on a project called “e-mobility Berlin” launched in September 2008. While Daimler provided 100+ electric cars, RWE undertook to develop, install and operate 500 charging stations including the power supply and central control system. When suitable batteries are available, re-feeding stored power from cars to the grid will be possible. We intend to reduce the carbon emissions from our own fleet of vehicles by about 20 % by 2012.

TEPCO's activities for a future low carbon society are varied from supply side to demand side, based on three pillars of our fundamental policy, i.e.: Nuclear Power, Renewable Energy, and Energy Efficiency.

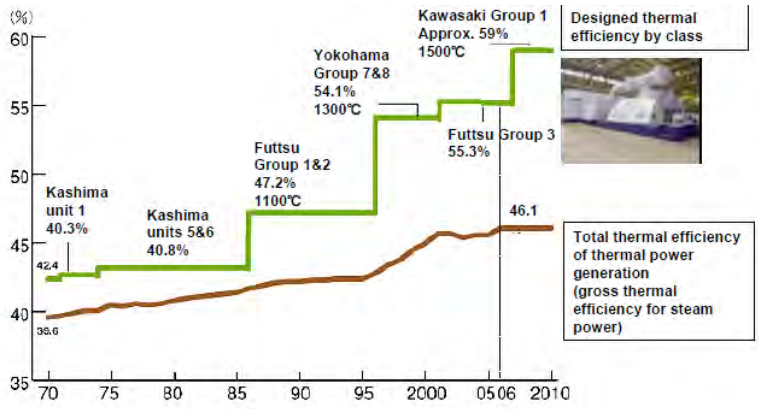
Supply-side Management

Nuclear Power

We have set a goal to achieve 50% ratio of non-fossil fueled generation by 2020 to meet our CO2 intensity target, and nuclear power is a central to achieving that idea. We have 17 nuclear power units whose output is approximately 1,700MW, and are committed to those safe and stable operations. In 2008FY, CO2 emission was reduced by 47.9 million CO2-tons thanks to these nuclear power stations.

MACC

We have introduced More Advanced Combined Cycle (MACC) with 1500 deg-C gas turbine technology whose thermal efficiency is about 59%. We also have a plan to implement more efficient MACC II in 2016, or 1600 deg-C gas turbine technology whose thermal efficiency is about 61%. MACC II can reduce CO2 by about 30% compared to conventional typed generation.



IGCC

We are involved in the demonstration project of Integrated coal Gasification Combined Cycle (IGCC) in Nakoso, Fukushima Prefecture, which is to finish 5000 hours continuous operation test in 2010, ensuring the next step of commercial basis operation.

CCS

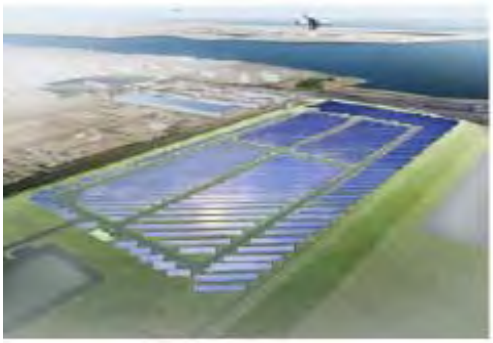
We have participated in a joint venture to accelerate R&D for CCS, and have implemented a small scale- experimental plant, some investigations and researches.

Renewable Energy

We have implemented various types of renewable energy as follows.

- The Tochikawa project (1,000MW), the medium-small sized hydropower, will commence its operation in 2010. And the Tokyo generation co, our group company, has developed and operated 9 micro-hydropower sites (1,605kW in total).
- The Hachijojima Geothermal power station (3,300MW) has been in service since 1999, as well as the Hachijojima wind farm (500MW) since 2000.
- Wind power business is managed by the Eurus Energy, our group company, which has developed 1,830MW wind farms in the world including Japan.
- Mega solar power projects at the three sites, whose output is approximately 30MW in total, have been under planning.
- The Hitachinaka coal-fired thermal power station is to start burning wood-made-pellets mixed with coal (Wood mixing rate is 3%) in 2012, lowering CO2 emission by 0.11 million

CO2-tons per year.



Hachijojima geothermal power plant
(3,300kW)

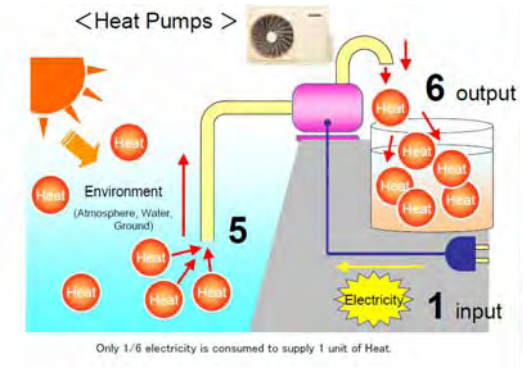
APP

We have participated in the Asia Pacific Partnership (APP), and cooperating capacity building by providing member countries with our know-how to improve energy efficiency of the existing coal-fired thermal power plants through peer-review activities in China, India, etc.

Demand-side Management

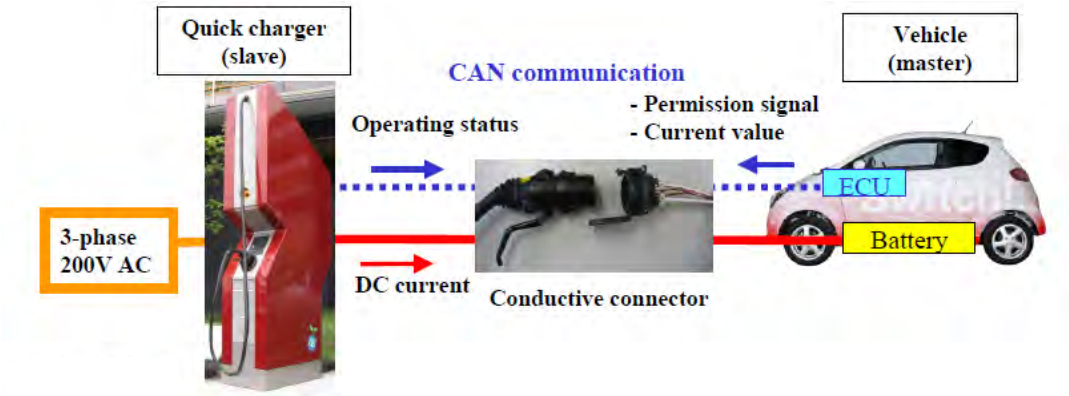
Heat pumps

We have been involved in the joint development of this technology with manufactures, and have taken promotional activities through Medias for market penetration of the Eco-cute, and all electric homes. We also have implemented joint sales promotions with housing and equipment manufactures. As of March 09, approximately 1.74 million Eco-cutes have been sold.



Electric Vehicle (EV)

We have been very active in developing and promoting EV itself and a quick charger in collaboration with various manufactures. As for EV, we have a plan to introduce 3,000 EVs for our business use (310 in use in 2009). As for a quick charger, we have developed the CHAdeMO typed quick charger using CAN communication as shown in the graph below. And, this March, with TEPCO leadership, the “CHAdeMO” association consisting of 158 foreign and domestic companies & governments including TEPCO, TOYOTA, NISSAN, and MITSUBISHI, was established, with a view to promoting the global use of this typed quick charger, and seeking for an international standard. Mr. Katsumata, TEPCO chairman, is nominated as the chairman of this association.



CHAdeMO

All Electric Factories

Our showroom called “I-square” has exhibited various advanced electrical technologies. This is one of our new sales activities to invite key persons of food, transportation, car, manufactures, etc, promoting all electric factories. There are some cases for introductions and joint researches

of all electric factories.

Information Provision

We have been promoting energy saving and less CO2 activities through exhibitions, medias, web-site, etc. We have made useful websites such as “Energy saving life navigation” and “CO2 accounts book” which provide consumers with the amount of their household energy uses and CO2 emissions as well as guidelines for improvement. “Electricity shape up carte” is another website we made to provide with your monthly energy consumption level.