Kansai Electric Power Group

CSR Report 2010



Kansai Electric Power Group and its pledge to stakeholders

The Kansai Electric Power Group aims to become the No. 1 company in customer satisfaction in its business areas, built around energy, which are foundational to people's lifestyles and society as a whole. Through its various business activities, the Group will respond to stakeholders' requirements and expectations while obtaining their trust and understanding, and will contribute to the development of a sustainable society.



Editorial policies

- This report on the Kansai Electric Power Group's work related to the economy, society, and the environment is for our customers and stakeholders that support our businesses.
- In preparing this report, we referred to Sustainability Report Guidelines, 3rd Edition, published by GRI, and Environmental Report Guidelines, 2007 Edition, from Japan's Ministry of the Environment. Guidelines for financial statements can be found at the URL below:

http://www.kepco.co.jp/corporate/csr/index.html

• When information related to items published in this report are available online, the URL is given, accompanied by a "Web link" icon.

Web The Kansai Electric Power Group's corporate vision http://www.kepco.co.jp/corporate/vision/index.html

Scope of report

- Period covered: April 1, 2009, to March 31, 2010. (Important items from outside this period have also been included in the report.) Companies covered: The Kansai Electric Power Co., Inc., and
- Kansai Electric Power Group companies. Areas covered: economic, social, environmental

Report publication date

- Published October 2010
 - 2009 edition published October 2009.
 - 2011 edition to be published in the autumn of 2011.
- To find out more about the Kansai Electric Power Group, we recommend reading the following publications.



Web site for detailed financial information: http://www.kepco.co.jp/ir/index.html

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Formulating the Kansai Electric Power Group Long-term Growth Strategy 2030, with CSR as a firmly held value



Our unchanging mission -

Continue to serve customers and communities

Since its inception, the Kansai Electric Power Group has provided its customers with a safe and stable supply of goods and services, principally consisting of electrical power. It has always been our mission to contribute to the sustainable development of the Kansai region, providing a solid foundation for customers' living standards and regional industrial activity.

This long journey has never been straight or smooth. Even so, we have remained constantly mindful of our position as a corporate citizen, and have always striven to fulfill our responsibilities diligently.

Whether building the Kurobegawa No. 4 Power Station, developing nuclear energy, or enhancing the Group's services, we are constantly tackling new issues. We are striving to operate in harmony with the environment by adopting clean fuels and planting forests. We also take part enthusiastically in local events and festivities, building an open and constructive dialog with the communities we serve.

Recent years have seen rapid change in environmental conditions. The momentum toward a low-carbon society is growing, while the worldwide competition to secure resources is intensifying and populations are declining in many regions. In the near future, we can expect to confront changes we have never experienced before. Yet no matter how much the world may change, we at the Kansai Electric Power Group will persevere in bringing the best possible solutions to customers and communities, in whose lives we continue to play such an essential role.

It is in this spirit that the Group drafted the Kansai Electric Power Group Long-term Growth Strategy 2030.

Our corporate social responsibility -

Firmly held values

To serve customers and communities well, all employees of the Kansai Electric Power Group carry out their own tasks diligently, as required by their own posts. We are committed to satisfying our customers and other stakeholders and earning their trust. By accomplishing all of these things, we recognize that we can drive the Group's growth and motivate our employees. This is the virtuous cycle to which we at the Kansai Electric Power Group aspire.

The basis on which all these achievements become realizable is corporate social responsibility (CSR)—the fulfillment of our duties as a member of society. In our longterm growth strategy, this responsibility is clearly recognized and loudly proclaimed. We, the directors and employees of the Kansai Electric Power Co., Inc., and its affiliated companies, will continue to maintain a clear vision of CSR for the entire Kansai Electric Power Group.

Promoting CSR -

Each Kansai Electric Power Group employee is the star of CSR

The key person in moving CSR forward is each and every employee of the Kansai Electric Power Group. In each workplace, all employees under their own initiative test a variety of methods, with guidance from key CSR persons.

I intend to make personal visits to every workplace, explaining directly and repeatedly to everyone what the CSR approach is and why it is so important.

At the same time, we are continuing to take every possible measure to create dynamic workplaces that nurture and motivate employees, to train employees and to foster a supportive atmosphere.

Through the CSR Report -

We invite frank opinions on our initiatives

One of the purposes of this CSR Report is to foster close communication with all stakeholders. On the next and subsequent pages, we are including special features on the Group's long-term growth strategy and the challenge to create a low-carbon society.

After the special features, this report describes the Group's CSR initiatives with as much specific information as possible, organizing the Kansai Electric Power Group's efforts in accordance with the six action principles drafted as a guide to CSR practice.

I invite you to read this report and offer us your frank and unvarnished opinion regarding future issues and any other aspects of the Group's CSR profile.

Narlow Jacqi

Makoto Yagi President and Director

Overview of Kansai Electric Power



Fiscal year-end power source

composition:

(Total 40.25M kW)

hermal 52%

21.01м

Hydropower 22%

8.91MH

Nuclear 26%

Notes: 1. Power source composition and fiscal year-end power source composition include power received from other companies (interchange power and pumped-storage hydropower are not included).

trom other companies (interchange power and pumped-storage hydropower are n 2. Due to rounding, the totals may not equal 100%.

- Renewable energies

hermal 44%

6.6в

.1 B kWh

System map (as of March 31, 2010)

Power source composition:

(Total 152.7B kWh)

15.7B kWh-

Hvdropow

luclear 45%

10%

Supply area:



Integrating CSR into the management of the Kansai **Electric Power Group**

In March 2010, the Kansai Electric Power Group established the Kansai Electric Power Group Long-term Growth Strategy 2030. The purpose of this plan is to serve as a compass, keeping the Group focused on its unchanging mission through the unpredictable times ahead. One of the key features of this growth plan is that it explicitly positions CSR as the basis for all activities.



Immediately after Kansai Electric Power was founded in 1951, its first president, Shiro Otagaki, called for it to maintain a "Maedaregake Spirit" (the spirit of consideration for and service to others) as a private-sector company. These statements encapsulate the Kansai Electric Power Group's approach to what is now called CSR. In 1964, the formula was rephrased as the Management Philosophy (the establishment of Kanden services). In 2004, as the business environment and the Group's modes of operation changed dramatically, the Kansai Electric Power Group Management Vision was drafted. At this time the Group clearly enunciated CSR as an integral part of its management vision in the Kansai Electric Power Group CSR Action Charter, consisting of six action principles needed to realize its "ideal enterprise state" as an enterprise that is "No. 1 in customer satisfaction." Further,

in March 2010, the Kansai Electric Power Group established the Kansai Electric Power Group Long-term Growth Strategy 2030. This strategy aims to prepare the Group for unprecedented changes, including accelerating movement toward the achievement of a low-carbon society. This strategy also establishes CSR as "firm values," a part of the ideal or target state of the Group, along with the goals of being a main player in a low-carbon society, a pioneer in the stable supply of next-generation energies and the best partner of customers for energy and living. In the future as in the past, CSR will continue to hold a place in the very foundation of the Group's management.

> Web The Kansai Electric Power Group's corporate vision http://www.kepco.co.jp/corporate/vision/index.html Kansai Electric Power Group Long-term Growth Strategy 2030 http://www.kepco.co.ip/corporate/strategy/index.html

Kansai Electric Power Group Long-term Growth Strategy 2030

Our Target State for 2030

The Group's firm values include a safety culture, which vows to never again see an accident like that of the Mihama Nuclear Power Station Unit 3, and management that values people, by which we strive to see the other side's perspective. We recognize the vital importance of practicing CSR, fulfilling our responsibilities to the communities in which we do business.

Toward higher customer satisfaction and a lowcarbon society

Deploying the Kansai e-Eco Strategy

Our basic approach toward realizing a lowcarbon society

Global warming is an extremely serious global issue, threatening natural ecosystems and our way of life in countless ways.

Solving these and other difficult problems requires international coordination, along with the ability to improve people's lives and develop the economy with a consistent, long-term vision. In the view of the Kansai Electric Power Group, the goal of realizing a lowcarbon society must be pursued through measures that are realistic and practical

Specifically, an effective approach to realizing a low-carbon society must include both demand-side and supply-side measures. Demand-side measures include installation of high-efficiency heat pumps and other energy-saving equipment, and switching from oil and gas to low-carbon energy sources such as hydroelectricity. On the supply side, the Company can switch to low-carbon means of supplying customers with the energy they need. By combining these two approaches, it is possible to create a virtuous cycle leading toward a low-carbon society.

Basic approach to realizing a low-carbon society



Realization of a low-carbon society

What is the Kansai e-Eco Strategy?

The Kansai e-Eco Strategy is one of our measures for long-term growth as a main player in a low-carbon society, as spelled out in Kansai Electric Power Group Long-term Growth Strategy 2030 announced in March 2010. Execution of the three measures listed below constitutes the Kansai e-Eco Strategy

-The Kansai e-Eco Strategy

- Accelerate conversion to low-carbon electricity
- 2 Contribute to energy conservation, cost reductions and CO₂ reductions by customers and society.
- Onstruct the Kanden Smart Grid.

The Kansai e-Eco Strategy includes solutions from both the supply and demand sides. This strategy represents an advance on the New ERA Strategy, established in 1995, focusing on the realization of a low-carbon society and the construction of a Kanden Smart Grid.

Measures included in the Kansai e-Eco Strategy

Accelerate conversion to low-carbon electricity

To reduce the amount of CO2 its customers emit as they use electricity, Kansai Electric Power must first supply those customers with low-carbon electricity. The Kansai Electric Power Group is accelerating supply-side measures to shift to low-carbon energysources

Specific measures are implemented by maintaining and improving the utilization of nuclear energy while ensuring safe and stable operation, putting existing plants to more efficient use, and installing new nuclear generating equipment and replacing relevant equipment. In addition, the Group is introducing renewable energies (see page 23), promoting customers' use of solar power and expanding hydroelectric operations. Moreover, the Group is improving the efficiency of thermal energy and working to balance supply and demand.

As a result of all these efforts, renewable and other non-fossilfuel energy sources are expanding. These sources, which accounted for roughly 50% of the Group's energy production in FY 2008, are expected to rise to between 60% and 70% by 2030.

Note: Includes electric power purchased from other companies (other than interchange power and pumped-storage hydropower).

Contribute to energy conservation, cost reductions and CO₂ reductions by customers and society

The Kansai Electric Power Group believes that customers' and society's need for low-energy, low-cost, low-CO2 solutions will increase dramatically.

To that end, the Group is supporting customers' energysaving efforts while introducing high-efficiency heat pumps and other devices that make effective use of solar-heated air. By recommending these devices, which utilize low-carbon-process electricity described in **1** above, the Group is moving forward with efforts to enhance customer satisfaction while realizing a low-carbon society

Construct the Kanden Smart Grid

Reducing the amount of CO2 released when electricity is consumed certainly requires 1 acceleration of the shift to low-carbon-process electricity and **2** contributing to customers' and communities' ability to reduce energy consumption, costs and CO₂ emissions. However, this goal also requires something to link these two together: a highefficiency, high-quality, highly reliable electricity distribution system. The Kansai Electric Power Group is using new technologies such as data communications and storage battery technology to build a radically new power grid, bringing added comfort to customers along with the realization of a low-carbon economy.

In this and many other ways, the Group is joining hands with a wide range of partners to move forward with the Kansai e-Eco Strategy, to shift the region to a low-carbon basis over the medium and long terms.

The Kansai Electric Power Group's approach to the achievement of a low-carbon society



From Kansai to the world: promoting globalscale initiatives

In addition to the Kansai e-Eco Strategy, a low-carbon strategy focused on the Kansai region, the Group is advancing numerous activities abroad and developing a series of leading-edge technologies. Through these efforts, the Group's aim is to contribute to the realization of a sustainable, low-carbon society on a worldwide scale

(For details, see pages 21 to 27.)

The Kansai Electric Power Group CSR Action Charter

The Kansai Electric Power Group's business activities draw support from customers, regional communities, business partners, shareholders, investors, employees and many other segments of society. This trust the Group earns from all these communities is the very bedrock of the Group's operations, without which we would be unable to maintain sustainable growth and fulfill our mission. By fulfilling its responsibilities as a member of the community and faithfully meeting the expectations of the community as a business, the Group contributes to sustainable development while reinforcing that hard-earned trust. Based on this awareness, the Kansai Electric Power Group deploys six action principles in all aspects of its operations, meeting its responsibilities to society as an enterprise.

CSR Action Principles

- 1. Safe, Stable Delivery of Products and Services
- 2. Progressive Approach to Environmental Problems
- 3. Proactive Contributions to Development of Local Communities
- 4. Respect for Human Rights, Development of Favorable Work Environments
- 5. Highly Transparent and Open Business Activities
- 6. Strict Enforcement of Compliance

Kansai Electric Power Group CSR Action Charter http://www.kepco.co.jp/corporate/csr/charter.html

The Kansai Electric Power Group CSR Action Standards

Directors and employees recognize at all times that they are members of the Kansai Electric Power Group, always maintaining the propriety and dignity appropriate to that station and acting in the best interest of society. In carrying out the Group's operations, directors and employees maintain safety as their first priority, strictly comply with all relevant laws, corporate ethics and social rules, conduct their duties diligently, and make every possible effort to make the customer happy.

Carrying the Conduct Card

Every employee has been issued with a Conduct Card to carry, which is printed with the Kansai Electric Power Group management vision and CSR Action Standards. Employees fill in their own action targets on the reverse side and use the card to check their actions and targets in their everyday business activities.



Web Kansai Electric Power Group CSR Action Standards http://www.kepco.co.jp/corporate/csr/standards.html

CSR Procurement Policy

Aiming at the best suited formulation, maintenance and operation of our equipment, the Purchasing Department of Kansai EP timely and ecologically procures equipment, materials and services that excel in safety, quality and price. Through these procurement activities, we would like to drive forward corporate social responsibility.

As our procurement activities are supported by all of you, our valued business partners, we believe that working to build mutual trust and forging the stronger-than-ever partnership will directly lead to the promotion of CSR activities. The Purchasing Department of Kansai EP will set and practice "Behavioral Standards for the Procurement Activities." We would like you to understand the "Behavioral Standards for the Procurement Activities" and practice "Requests for the Suppliers" in a proactive manner.

Behavioral Standards for the Procurement Activities

- 1. Highest priority to the safety, maintenance and improvement of quality and technical strength
- 2. Being environmental-friendly
- 3. Establishment of fiduciary partnership
- 4. Transparent, open business activities
- 5. Full compliance

Web Kansai Electric Power Procurement Activities http://www.kepco.co.jp/english/procurement/index.html

Risk management

Management of risk accompanying business activities

In line with the Kansai Electric Power Group Risk Management Rules, risk accompanying business activities is, in principle, managed autonomously by the executive section of each respective business division. In cases of risk deemed to be important across multiple organizational levels, risk management is strengthened by determining, when necessary, risk management items by field of specialty, after which experts in each field provide advice and guidance to the various business execution divisions.

In addition, a Risk Management Committee has been formed to manage risk comprehensively. The Committee strives to manage risk accompanying Group business activities at the level deemed appropriate in each case. Based on this risk management system, the Company carries out appropriate financial reporting and ensures the trustworthiness thereof, as stipulated in the Financial Instruments and Exchange Law.

CSR promotion system

The CSR promotion system centering on the CSR Promotion Council

Kansai Electric has a CSR Promotion Council in place, chaired by the Company's president. These meetings establish the general policies and activities that guide the entire Group in promoting CSR, provide general coordination of specific activities, and serve to encourage implementation. Issues of a specialized nature are sent to committees, such as the Compliance Committee and the Environmental Board, for deliberation. Policy is decided through the accumulation of the various deliberations of these committees and subcommittees.

The policies mooted at the CSR Promotion Council are communicated to each sector and operating location, and activities are deployed at each.

Other companies in the Kansai Electric Power Group, however, conduct CSR autonomously, exchanging information and opinions as required, thereby strengthening liaison among Group companies.

Corporate governance

The Kansai Electric Power Group aims for further growth based on a firmly held vision of CSR. Recognizing the importance of transparency and soundness of business operations in achieving this goal, the Group aims to strengthen its corporate framework.

Basic system of corporate governance

Kansai Electric Power has a number of committees, such as the meetings of the executive directors, the CSR Promotion Council and the Risk Management Committee, which oversee and ensure the appropriate execution of duties. These committees operate under the supervision of the Board of Directors, which is appointed at the General Meetings of Shareholders. The Company also employs corporate auditors, a Board of Auditors and accounting auditors. From each of their professional perspectives, these auditors confirm that the Company executes its operations in an appropriate and lawful manner. This system constitutes the foundation of Kansai Electric Power's corporate governance system.

Assurance of appropriate execution of business matters

Kansai Electric Power takes proactive steps to enhance its corporate governance capability on an ongoing basis. Board of Directors meetings are convened regularly once each month, complemented by extraordinary meetings held when deemed necessary, and it is here that matters of essential importance to Group management are deliberated and decided. In addition, all Directors are continuously supervised through regularly issued reports on the execution status of the duties incumbent upon them.

In executing important business matters, the Company implements swift and proper decision-making by convening meetings of the executive directors regularly—in principle once every week—in order to implement efficient and effective corporate management.

The system of executive officers was introduced in order to separate the executive and supervising functions of management and to boost the speed and efficiency of business execution.

Assurance of transparency and soundness

Kansai Electric Power uses a system of Corporate Auditors to audit continuously and effectively the appropriateness and adequateness of Directors in the performance of their duties. The Corporate Auditors attend important meetings, including Board



of Directors meetings and Executive Meetings, where they state their opinions, listen to explanations by the Directors pertaining to matters of importance to Company management, and look into the business and assets status of the Company's main bases of operation and Group companies. Through auditing, the Corporate Auditors ensure the transparency and soundness of the Company's business operations. In addition, meetings are regularly convened between the Corporate Auditors and Representative Directors, et al., as a way of promoting exchanges of opinion.

To support the duties of the Corporate Auditors and Board of Auditors, an Auditing Office (13 members) has been established. This is a specially appointed organization in charge of actual auditing duties, operation of Board of Auditors meetings, etc. To ensure the Office's independence, it functions directly under the Corporate Auditors and does not perform any other duties relating to the executive functions of the Group. Outside officers have also been appointed: three Directors and four Corporate Auditors, the latter representing a majority among the seven Corporate Auditors in total. Outside Directors and outside Corporate Auditors have no special rights or interests in the Company and retain independence.

Enhancement of internal auditing functions

Kansai Electric Power has established an Internal Auditing Committee whose functions are to share and deliberate a broad range of management issues relating to quality and safety, secure views and information from outside the Company and, from an impartial and specialized standpoint, maintain proper internal auditing of the Kansai Electric Power Group as a whole.

An Office of Internal Auditing, consisting of 41 members, has also been established as an organization specially assigned to perform internal auditing. The office conducts regular auditing of risk management systems, risk management status, etc., and submits proposals or reports to the Executive Meetings concerning internal auditing plans and their results. At the various work areas, activities needed for making improvements in light of the auditing results are carried out in an ongoing quest to ensure proper business management.

As the vital overseers of corporate governance, the Office of Internal Auditing, Corporate Auditors, and Accounting Auditors coordinate, at their discretion, in the performance of auditing duties. They also maintain close ties for exchanging views regarding auditing results, etc.



Our mission and responsibility as a lifeline service provider

The "best mix" of power sources and its stable, long-term supply

Because Japan is poor in natural resources, it has a fragile energy structure that is dependent on imported or specific energy sources. Kansai Electric Power has already made efforts to build up a combination of multiple energy sources to avoid being dependent on any specific one.

Specifically, Kansai Electric Power puts safety assurance first while engaging in the comprehensive consideration of energy security, environmental impact, and economics. The Group seeks a well-balanced, optimal combination of power sources based on nuclear energy, including the nuclear fuel cycle, and also including other energy sources such as thermal and hydroelectric power.

Power source composition comparison

Composition ratio of power generation facilities at the end of the fiscal year



Notes:

 Includes electric power received from other companies (interchange power and pumpedstorage hydro- power are not included).

2. Due to rounding, the totals may not equal 100%.

Stable fuel procurement

In the procurement of fuel for thermal power plants, we are aiming to optimize our purchasing balance of crude oil, LNG, and coal while accommodating changes in electric power demand. For LNG, we are diversifying suppliers and contract terms, and making efforts to build up an integrated system that extends from gas development and production to importing and receiving, by acquiring upstream equity and our own LNG transport vessel, *LNG EBISU*. To support flexible procurement, we plan to introduce three dedicated coal carriers to our fleet, and acquire additional transport capacity in oil, for fuel transportation to our thermal power plants. With the implementation of these various measures, we expect to secure stable, long-term fuel supplies while reducing cost. With respect to nuclear fuel procurement, while the Company continues to rely on long-term contracts as the mainstay of its procurement operations, it is also diversifying its procurement channels. Kansai Electric Power is purchasing fuel from a wider range of sources, and is participating in uranium-mine development projects to protect its procurement interests. For example, in recent years the Company has joined a mine development project in Kazakhstan and a uranium enrichment project^{*} with AREVA NC, a French nuclear energy company.

* Enrichment project: SET, a subsidiary of AREVA NC, will build and operate the enrichment facility in the southern French commune of Pierrelatte. When fullfledged operation begins, the plant's production capacity is expected to equal some 13% of global demand.

To provide higher-quality electric power

To provide electric power safely and stably, Kansai Electric Power works to operate power grids that link power stations with consumers reliably as well as for the optimal configuration of facilities. We are also engaged in rigorous efforts to prevent accident reoccurrence, as a result of which Kansai Electric Power's electricity achieved one of the world's highest levels of power supply reliability in 2009.

Annual power interruption time per household



The Company is continuing to develop and install new technologies and construction methods to ensure that accidents are prevented and to enable swift recovery in the event an accident does occur. In addition, Kansai Electric Power is carrying out quantitative evaluations of the state of deterioration of its facilities, which were constructed during the period of high economic growth in the 1950s and 1960s, in order to deal reliably with the aging of these facilities. The Company is implementing the efficient, planned preservation and repair of facilities by such means as inspections and determination of repair periods in accordance with their conditions.

The Company is also striving to ensure a fully operational supply system in terms of both speed and quantity in response to the demand from society, responding reliably to customer needs and contributing to the further development of the economically expanding Kansai region.

Training the personnel required for the safe, reliable provision of products and services

To enable us to provide products and services in a safe, reliable manner, Kansai Electric Power recruits staff yearly on a continuous basis and implements continued, systematic, repeated education and training with the aim of nurturing specialist personnel.

We are promoting a range of initiatives to ensure that skills and expertise are maintained and passed on, including an expert technician system,* so that the skills and expertise built up over the years will be steadily passed on and improved throughout the entire Group.

* Frontline staff who possess high-level technical expertise and skills particular to the electrical business, as well as the enthusiasm and leadership required to pass these down to the next generation, are designated as "expert technicians." They instruct their juniors in the workplace about techniques and skills, so that they are properly maintained and transferred. As of May 2010, a total of 181 people have been certified.

Safety initiatives in the gas business

Kansai Electric Power, a natural gas supplier in almost all Kansai metropolitan areas, takes all possible measures to ensure the safety of customers, including ensuring the safety of customer appliances, in compliance with the Gas Business Act and relevant regulations. For example, our security system consists of 14 operation bases including power plants and electric power system centers. In addition to statutory inspections, we carry out security tasks such as periodic inspections of customer gas equipment based on our own management standards. We are also improving regular education and training, including through companywide emergency responses to enhance our technical expertise.

We also offer safety presentations to customers. At these sessions, customers learn how to take the first steps themselves in the event of a gas leak, and practice shutting off gas valves. Through explanations and group practice sessions such as these, customers gain a united sense of purpose, and redouble their efforts to ensure safety.



Training in shutting off gas valves in an emergency



Joint training sessions with customers

Preparing for natural disasters and influenza outbreaks: continuing to deliver electricity regardless of crisis

Based on our mission of the stable provision of electric power, Kansai Electric Power is engaged in initiatives for "strengthening facilities to withstand disaster" and "establishing a disaster control system to enable rapid recovery" as basic measures for dealing with natural disasters such as earthquakes, typhoons, snow damage, heavy rain, and lightning damage. Also, in recent years the Company has been pursuing measures in preparation for outbreak of a new strain of influenza.

Strengthening facilities to withstand disaster: preparing for a wide range of disasters

Thanks to lessons from past natural disasters, electrical distribution equipment is today designed to sustain minimal damage even in the event of earthquake, typhoon or other such occurrence. Also, the power distribution system covers the Kansai region like a fine mesh net. In the unlikely event of damage occurring to some of the routes on this network, power can be supplied quickly from alternative connecting routes.

Disaster control system to enable rapid recovery: comprehensive preparations for every eventuality

In the event that power supply facilities are damaged as the result of a disaster, or upon actually detecting such damage, a disaster control system, as described below, will immediately be established to deal with the situation. The Company gathers and distributes

information both from within the Group and from other sources, and determines recovery policy, in promotion of recovery activities.

Emergency Disaster Measures Headquarters at the Company's head office

Disaster control system

Organization	Criteria for establishment			
Disaster Alert Headquarters	Cases where a disaster such as a typhoon is predicted			
Emergency Disaster Measures Headquarters	Occurrence of earthquake with an intensity of 6-lower or greater on the Japanese scale within power supply area Other necessitating circumstances			

Preparations for a predicted large-scale earthquake

The Tonankai and Nankai earthquakes predicted to occur during the first half of the 21st century are a matter of concern, as is the potential occurrence of an earthquake with an epicenter in the Kansai region.

In preparation for these major earthquakes, the departments concerned are collaborating to investigate matters such as measures for disaster mitigation and rapid recovery as well as logistical support. The Company is also engaged in repeated drills to simulate major earthquake damage, with the aim of establishing a robust disaster prevention system.

Preparing for an outbreak of a new strain of influenza

In April 2009, an outbreak of a new strain of influenza, A/H1N1, occurred. Concern is rising that an even more virulent strain of influenza will emerge and spread in the near future.

To prepare for such an event, Kansai Electric Power has drafted a plan to ensure continued operation of vital systems and services in case of a new-strain influenza outbreak. Even in the event of a pandemic, systems are in place to ensure customers a stable supply of electricity.



Initiatives prioritizing safety at nuclear power plants

Necessity and features of nuclear power

Guaranteeing energy security

Japan is an energy-poor country: if nuclear power is excluded its self-sufficiency rate is only 4%, with the remaining 96% imported from overseas (figures from Ministry of Economy, Trade and Industry's Energy White Paper 2010). Also, even though a spike in energy prices (such as in the one in FY 2008) did not occur in FY 2009, similar rapid changes in conditions cannot be ruled out in the future, given the anticipated expansion of demand for energy in developing countries. This suggests that it is necessary to secure resources in order to ensure the reliable provision of electricity.

Unlike crude oil or natural gas, the uranium used in nuclear power plants is available in many parts of the world, and most nations that possess it are politically stable, contributing to stability of supply. The fact that uranium contains a high concentration of energy also contributes to ease of transportation and storage as an energy stockpile.

In addition, reprocessing spent fuel from nuclear power plants recovers the useful resources of uranium and plutonium, which also facilitates in securing resource stability.

Nuclear power generation does not produce CO₂ emissions

As nuclear power generation utilizes the heat produced when uranium undergoes nuclear fission to generate electricity, like solar and wind power generation, it produces no CO₂ emissions when producing electricity. This makes it an extremely useful in curbing global warming.

Plu-thermal initiative

Spent uranium fuel from nuclear power plants is sent to reprocessing plants and its reusable substances (uranium and plutonium) recovered for use as MOX (mixed oxide) fuel. The process in which existing nuclear power plants use this fuel is known as the "pluthermal" process.

Kansai Electric Power is moving forward with plans to implement a plu-thermal system at Takahama Power Station beginning in FY 2010. In April 2010, marine shipments of the required MOX fuel began from the fuel-fabrication company's plant in France.

Safe operation of nuclear power plants

Attitude to safety at nuclear power plants

Kansai Electric Power is implementing a variety of measures to minimize risk and ensure sufficient safety at its nuclear power plants.

Design and function to maintain safety

The facilities at nuclear power plants utilize the concept of multiple protection to confine radioactive materials. To start with, the facilities are constructed to even stricter standards than those laid down by law, and their designs include fail-safe systems¹ and interlock systems², premised on the fact that machines break down and human beings make mistakes, in order to prevent a malfunction or human error from resulting in an accident. In the unlikely event of a malfunction occurring, safety measures are implemented at multiple levels, and multiple safety functions come into action: the abnormality is detected at an early stage and the nuclear reactor shuts down automatically, and large amounts of water are injected to cool the fuel and radioactive materials being contained within fivefold walls.³

Notes:

- 1 Fail-safe systems are designed to shift in the direction of safety in order to avoid dangerous situations should a mechanical malfunction occur.
- 2 Interlock systems utilize a system whereby a mistaken operation is not transmitted to related equipment even in the event that a human being makes a mistake when operating it.
- 3 Fivefold walls consist of five layers of walls to contain radioactive substances, and are used in pellets, cladding pipes, nuclear reactor pressure vessels, reactor storage vessels, and reactor buildings.

Safety measures in nuclear power plants (multiple protection)



Stringent implementation of measures for long-life usage

In order to ensure long-life usage of its facilities, Kansai Electric Power conducts technical inspections of nuclear power plants that have been in operation for more than 30 years, and has established the Long-term Maintenance Management Policy to be reflected in preservation activities. These technical inspections for aging-related changes are re-evaluated every ten years.

In November 2010, Mihama Power Station Unit 1 will celebrate its 40th year of operation. In view of its operating period, Kansai Electric Power conducted a technical reevaluation and, based on this evaluation, drafted a long-term maintenance and management policy. The Company also submitted a Request for Approval of Changes to Technical Specifications to Ministry of Economy, Trade and Industry (METI) with respect to this policy, and submitted an Evaluation of Long-Life Usage Technology to related local governments. Later, METI conducted an audit of the plant, including an on-site inspection, resulting in an Approval of Changes to Technical Specifications from the Minister in June 2010. The Company decided on an operating policy not to exceed 10 years, within the scope of the long-term maintenance and management policy, and distributed a report thereon to related local governments.

Flowchart of initiatives in long-life usage



Evaluation of power plant operational status by IAEA OSART

From January to February 2009, Kansai Electric Power was subjected to a review by the IAEA's Operational Safety Review Team (OSART), at Mihama Power Station. OSART offered high praise for the Company's measures to build a robust safety culture and submitted a set of 13 recommendations and suggestions for further improvements. Kansai Electric Power immediately began improvements in

accordance with those 13 issues, publishing the results in August 2009. From May to June 2010, the review team conducted a follow-up visit, confirming that Kansai Electric



Meeting between OSART and Kansai Electric Power

Power was making significant progress in its improvement activities. In light of this objective finding by an international agency, Kansai Electric Power will continue to engage in further improving safety and reliability with the aim of building up a firm culture of safety.

Teaching safety awareness

To improve employees' skills in operating, maintaining and inspecting nuclear power plants, the Company launched education and training programs for employees at the institution below.

Training at the Nuclear Energy Training Center (Takahama, Fukui Prefecture)

Using realistic mockups of actual equipment installed in nuclear power plants, employees practice maintenance and inspection. To ensure that past troubles are never repeated, the parts that were factors in previous failures are used in instruction, aiming to prevent human error, prevent abnormal conditions and detect any problems early. Because this training program provides a glimpse of the internal structures of nuclear power plants, which cannot normally be entered and viewed, it attracts some 4,000 visitors each year.



Practicing disassembly inspection of valve types used in actual nuclear power plants

Training at the Nuclear Power Operating Support Center (Ohi, Fukui Prefecture)

The Nuclear Power Operating Support Center offers a suite of highly advanced training facilities. An operational training simulator enables trainees to review a wide range of operating scenarios and even watch video of their own training. By reviewing and experiencing realistic simulations of abnormal scenarios, operators of nuclear power plants can bolster their skills.

The simulator is used not only for training, but also for many other tasks in operation that cannot be confirmed on actual plant equipment. For example, it is used to check information when revising operating manuals.



Since its opening, the center has trained over 2,000 operators

Providing services as a unified group

Your trusted partner in energy and living

As a comprehensive provider of electricity and other forms of energy, as well as a variety of information and telecommunications (IT) and lineup of business providing comfort and safety services in daily life, the Kansai Electric Power Group interacts with the people of the Kansai region in countless ways. These interactions enable us to grow closer to our customers and further to integrate our electricity and other Group operations as a total solution. By meeting and exceeding our customer needs, our aim is to become our customers' trusted partner in energy and living, for tomorrow's low-carbon society.

How the Kansai Electric Power Group aims to grow as an integrated corporate group



Providing total solutions by combining excellent Group services, with a focus on electricity

Toward improvement of customer service

To provide ever greater levels of customer satisfaction, the Kansai Electric Power Group ensures thoroughgoing, customer-oriented business management and is engaged in effective customer service operations from receipt of applications from customers to meter reading and payment collection.

The Group is also providing an array of new, Internet-based services. By offering the best possible contract terms and modes of energy use, the Group supports reduction of energy use, costs and CO₂ emissions for all customers.

Improving services by listening to customer opinions

Kansai Electric Power collates and analyzes customer opinions gathered through the call centers and Electric Life Consultation Desks established to provide points of contact with customers. The

Customer service improvement philosophy



customer needs identified in this way are reflected in improvements to the value of products and services. Kansai Electric Power launched an inquiry service to notify customers of the amount of electricity they use (see page 24), and made several improvements, including reform of records provided to customers.

Implementing customer satisfaction surveys

Kansai Electric Power has implemented customer satisfaction surveys continuously since 1993. These are performed via a research company, and customers who have applied for the Company's services are asked to give their impressions of our staff and evaluate their tasks. The results are reported appropriately to the sales offices concerned. In this way we are able to objectively assess the service levels of our sales offices, verify the results of efforts to improve our work, and discover areas for further improvement. These also provide useful information for setting targets and improvement actions for subsequent business periods as we strive to further improve customer satisfaction levels.

In addition, Kansai Electric Power Group companies also carry out regular customer satisfaction surveys, the results of which lead to improvements in existing service content and the development of new services, as we endeavor to further improve the level of customer satisfaction as a unified group.

Providing lifestyle solutions

Promotion of totally electric homes

By using the environmentally friendly EcoCute, the Group is expanding its efforts to promote totally electric homes that are safe, convenient and economical, contributing to lower energy consumption, lower costs and lower CO₂ emissions by customers and society.

We also deal with inquiries about totally electric homes via telephone calls from the Electric Life Consultation Desks and visits by staff, responding swiftly to customers' needs in line with their equipment. In addition, we are working with external partners such as house builders, developers, and local dealers to gain their understanding of the advantages of totally electric homes and encourage them to recommend such residences to customers. Thanks to these steady initiatives, as of March 31, 2010 the number of totally electric homes reached some 770,000 in the Kansai Electric Power supply area, and as of March 31, 2010 some 1.07 million households were using the EcoCute and other electric water heaters.*

In the future, we will focus on activities to promote the "totally electric homes plus" plan, combining the totally electric home with highly environmentally friendly products and services such as solar power generation and electric vehicles.

 \ast The number of contracts for nighttime power supply used for electric water heaters, etc., in our supply area

Increase in number of totally electric homes



* Results for the Kansai Electric Power supply area, including small properties such as studio apartments.

* Survey by Kansai Electric Power. Figures are cumulative

Promoting widespread adoption of the EcoCute

The EcoCute is a highly efficient water heater system that employs a heat pump mechanism to raise the temperature of water by using heat contained in the air. It provides outstanding energysaving and environmental performance, using only one third of the power required by existing electric water heaters. It is included in government-proposed initiatives, and its further market penetration was mentioned in the Plan to Achieve the Targets of the Kyoto Protocol as a trump card for measures to curb global warming. Kansai Electric Power is disseminating information to customers on how the EcoCute can work to their advantage, including its outstanding features, and we are striving for its widespread adoption.

Example of total solutions based on the totally electric home

The Kansai Electric Power Group delivers total solutions, combining electricity and other services that only the Group can provide. In information and telecommunications services. K-Opticom Corp. offers a combination of Internet, telephone and TV services under the eo brand. In March 2010, this company launched eo Mobile, a new suite of services including a public, wireless LAN service that is scheduled to have one of the nation's largest collection of access points. In December 2009, by acquiring a major stake in MID Urban Development Co., Ltd., the Kansai Electric Power Group has enhanced its ability to offer fully electric homes appropriate for a low-carbon society. By combining totally electric homes and IT services such as these with home security, nursing care, health management support and other services related to better modern living, the Kansai Electric Power Group is drawing closer to its customers to offer services tailored to each customer's stage in life and mode of living. In this way the Group supports safety, peace of mind, comfort and convenient living for all its customers.

Total solutions focused on electricity



Providing solutions in the corporate field

Moves toward a low-carbon society are growing increasingly vigorous. Under revisions to the Energy Conservation Law and Basic Law for Prevention of Global Warming of April 2010, more enterprises than ever are being required to reduce energy use and CO2 emissions. Faced with highly stringent medium- and longterm targets from the national government, companies in Japan are strongly conscious of the need to reduce emissions of CO₂ and other greenhouse gases. Additionally, given the currently uncertain economic outlook, customers increasingly need to improve both environmental and economic performance. To solve these problems confronting many of its corporate customers, the Kansai Electric Power Group is working in unison to propose effective energy solutions. We propose optimal energy systems that combine, for example, Kansai Electric Power's low-CO₂-emission electricity service with highly energy-efficient electrical equipment, such as heat pumps that use renewable energy sources. In these and other ways the Kansai Electric Power Group is offering energy solutions that suit the lifecycles of customers' existing equipment.

Further development of energy solutions

The needs of today's customers are growing increasingly diverse. To respond effectively to these requirements, Group companies such as Kanden Energy Solution Co., Inc. are offering all-inclusive utility services, including equipment planning, design, installation, ownership, operation, maintenance and overhaul. Another service these companies are actively promoting is an energy management service, which assists customers in finding the optimal use of energy for their needs.



1



Progressive Approach to Environmental Problems

Kansai Electric Power Group Environmental **Action Plan**

With the goal of contributing to the realization of a sustainable low-carbon society, Kansai Electric Power Group is accelerating the momentum of our environmental efforts with the formulation of the Kansai e-Eco Strategy, which builds on and advances our New ERA Strategy, a comprehensive package of measures to prevent global warming. In line with this strategy, the Kansai Electric Power Group Environmental Action Plan was revised in April 2010. With this three-pronoed strategy as our basic course of action, we will continue working together as a group for the cause of environmental protection, to build a sustainable society.



Initiatives toward the realization of a lowcarbon society

We will make every effort to act as a main player in the realization of a low-carbon society, by promoting initiatives such as the Kansai e-Eco Strategy, a comprehensive strategy aimed at promoting a sustainable low-carbon society.

Kansai e-Eco Strategy

- a. Accelerate conversion to low-carbon electricity
- (a) Expanding the ratio of nuclear power generation to all power generation
- (b) Maintaining and expanding hydroelectric power generation
- © Improving the efficiency of thermal power generation
- d Promoting adoption of solar power generation
- Proactive adoption of biomass and other renewable energy sources b. Contribute to energy conservation, cost reductions and CO2 reductions by customers and society
- (a) Promoting the use of heat pumps and other high-efficiency devices (b) Diffusion of electric vehicles
- © Activities aimed at reducing energy use and CO₂ emissions from our business activities

c. Construct the Kanden Smart Grid

- (a) A more advanced power distribution system
- (b) Development of supply and demand control technology using storage cells
- © Development of output prediction technology for solar power generation d Visualization of energy consumption patterns

2 Activities abroad

- (a) Transfer of environmental technologies to developing countries, promotion of renewable energy initiatives
- b Afforestation project
- © Utilization of the Kyoto Mechanism, etc.

3 Development of advanced technologies

- (a) Development of technologies contributing to low energy consumption, low costs and low CO₂ emissions for customers (b) Development of technologies to construct the Kanden Smart
- Grid © Development of technologies leading to next-generation
- electrical power generation and realization of a low-carbon society

Initiatives toward the achievement of a sound material-cycle society

The entire Kansai Electric Power Group is working to promote initiatives aimed at the realization of a sound material-cycle society, including efforts to achieve the goal of zero emissions.

- Active efforts to achieve zero emissions, including activities related to promotion of the three Rs (reduce, reuse and recycle)
- Promotion of secure, thorough processing of all PCBs

3 Promotion of green purchasing

Initiatives toward a trusted, environmentally advanced corporation

Kansai Electric Power seeks to be recognized as a safe, trusted, and environmentally advanced corporation, making efforts in areas such as promotion of community environmental protection measures, environmental management and advancement of environmental communications.

Promotion of community environmental protection measures

- (a) Continuous measures to prevent air and water pollution (b) Strict controls on hazardous chemical substances and further
- efforts to reduce these substances © Promotion of measures to ensure the preservation of biodiversity

2 Advancement of environmental communications

- (a) Development of environmental-awareness-raising initiatives involving customers and community members
- (b) Public disclosure of environmental data

8 Promotion of environmental management

- (a) Collective environmental management initiatives involving the entire Kansai Electric Power Group
- (b) Utilization and ongoing improvement of the ISO 14001compliant environmental management system

Status overview of our business activities and environmental load (fiscal 2009)

	INP	UT	2	Business
F	uels for pow	er generation		Ne.
ation	Coal	1,419 thousand t (dry coal weight)		
r gener	Heavy oil	121 thousand kL		Amount power g
powe	Crude oil	1,313 thousand kL		65.9
emal	LNG (Liquified natural gas)	4,981 thousand t		Power de
s for th	Wood pellets	21 thousand kL (converted to heavy oil)		Fower ge
Fuels	Other	1 thousand kL (converted to heavy oil)		
Fue	ls for nuclear	(weight of pre-irradiation granium)		- mark
1				Amount of thermal
W	ater for pow	ver generation		43.0 TWh
Ind	ustrial water	4.66 million m ³		(0.1 TWh from biomass power generation
Cle	an water	1.20 million m ³		Purchased from
Rive gro	er water, undwater, etc.	0.80 million m ³		other companies 33.8 TWh
Seawater (desalinated)		2.78 million m ³		of which, solar, wind, biomass, and
	Reso	urces		power generation
L	imestone	30 thousand t		
A	Ammonia	6 thousand t		Power transmission a
	Off	ïce		ENGLAR TO BE SHOWN
Of	fice electricity	100 GWh		011
Of	fice water	0.59 million m ³		Οπιce
Co	opy paper	1,064 t		rate for
le fuels	Gasoline	3.3 thousand kL		97.5%
Vehic	Diesel oil	0.9 thousand kL		of low-pollution vehicles
				79.1%
				Environmental efficiency



power c



tion			Radioactive waste				
m tion			Amount of low-level radioactive waste generated* 9,900 drums (200 L drums)				
power			* Ne rec	t generation (generate luced amount)	ed amount –		
d within plants				Industrial w	aste, etc.		
storage			Tot em	al amount of issions	291 thousand t		
rWh			sificatior	Recycling	287 thousand t		
	1		sing clas	Reduction in intermediate treatment	nt 1 thousand t		
ution			Proces	Final disposal	4 thousand t		
/ rate				Recycling rate	98.7%		
ction)				CO ₂ emissions from office a	s resulting ctivities		
			Tota emi	al amount of issions	37.1 thousand t-CO2		
power			Kdown	Office electricity (0.265 kg-CO ₂ /kWh)	26.9 thousand t-CO2		
d within ormer			is brea	Office water (0.36 kg-CO ₂ /m ³)	200 t-CO2		
TWh			Emission	Vehicle fuels (Gasoline: 2.32 kg-CO ₂ /ℓ) (Diesel oil: 2.58 kg-CO ₂ /ℓ)	10 thousand t-CO2		
n losses ГWh			* Fig emi elec	ures in parentheses ir issions factor. Amoun ctricity use takes CO2	ndicate the CO ₂ t shown for office credits into account.		
				Custor	ners		
			1000	e	Amount of lectric power sold 141.6 TWh		
sold		000	Am	ount of electric pow	er sold		

Composite index* Amount of CO₂ emissions * Composite index = CO₂, SO_x, NO_x, and landfill disposal of industrial waste Resources consumed Oil, coal, LNG

• In calculations starting in fiscal 2007, we are using the LIME2 integrated coefficient developed by the Research Center for Life Cycle Assessment. * The amount of CO₂ emissions shown here takes CO₂ credits into account.

OUTPUT

Released into atmosphere CO2 (carbon dioxide)*1 41.61 million t-CO2

*1 Includes CO2 originating from electricity

purchased from other electric companies. *2 Amount of emissions taking CO₂ credits

Released into water areas

SOx (sulfur oxides)

NOx (nitroaen oxides)

into account.

COD emissions

Total effluents

(37.57 million t-CO2)*2

1,520 t

4.302 t

26 t

6.28 million m³

Kansai Electric Power Group CSR Report 2010

Eco Action (targets and results)

	Item	FX 2008 results FY 2009 targets and results		FY 2009 targets and results	Targets			Page			
	P 1 2000 results		Targets	Results Self-evaluat		FY 2010	FY 2011	FY 2012	rage		
li li	nitiatives toward the realization of a low	-carbon society									
	CO2 emissions reduction per unit of electric power used (sold) 0.299 kg-CO2/kWh *1 <0.355 kg-CO2/kWh> Approx. 0.282 kg-CO2/kWh *1 (5-year average for FY 2008-FY 2012)			eduction per unit rused (sold) 0.299 kg-CO ₂ /kWh ^{*1} <0.355 kg-CO ₂ /kWh> Approx. 0.282 kg-CO ₂ /kWh ^{*1} (5-year average for FY 2008–FY 2012) 0.265 kg-CO ₂ /kWh ^{*1} <0.294 kg-CO ₂ /kWh>				′h *1 Y 2012)	P. 21		
	Promoting "safety first" operations at nuclear power plants	72.4% facility utilization rate	Operate nuclear power plants with safety assurance measures to prevent a recurrence of an incident like the Mihama Nuclear Power Station Unit 3 accident	77.0% facility utilization rate	_	Operate nuclear power plants with safety assurance measures to prevent a recurrence of an incident like the Mihama Nuclear Power Station Unit 3 accident			P. 22		
	Maintaining and improving the thermal efficiency of thermal power plants (lower heating value base)	41.7%	44.0% or more	44.1%	0	45.0% or more *2			P. 22		
	Limiting SF6 emissions (calendar year basis) (gas recovery rate at inspection/removal of equipment)	98.0% (at time of inspection) 99.2% (at time of removal)	97% (at time of inspection) 99% (at time of removal)	99.0% (at time of inspection) 99.4% (at time of removal) *3	0		97% (at time of inspection 99% (at time of remova	n) I)	-		
SUS	Development and diffusion	Achieve amount required by the RPS Law (1,220 million kWh)	Achieve amount required by the RPS Law	Achieve amount required by the RPS Law (1,490 million kWh)	0	Achieve	e amount required by the	RPS Law	P. 22		
Jerallo	of renewable energies	Power output from subsidized facilities: 0.2 MW (Number of facilities: 28)	Promote the Kansai Green Electricity Fund	Power output from subsidized facilities: 0.3 MW (Number of facilities: 31)	_	Promote	e the Kansai Green Elect	ricity Fund	-		
	Reducing customer CO2 emissions through the diffusion and expansion of electric water heaters such as EcoCute *4 36 thousand t-CO2 (39 thousand t-CO2)			49 thousand t-CO2 (46 thousand t-CO2)	-	Reduce customer CO ₂ emissions through the further diffusion and expansion of EcoCute			P. 23		
Isna	Ratio of low-pollution vehicles to all vehicles held	74.8%	76.0%	79.1%	0	80.0%	81.0%	82.0%	P. 23		
	Number of next-generation electric vehicles and plug-in hybrid vehicles introduced		Approx. 200 vehicles by FY 2011 Approx. 1,500 vehicles by FY 2020	111 vehicles	-	Approx. 200 vehicles by FY 2011 Approx. 1,500 vehicles by FY 2020			P. 23		
	Promotion of environmental household account books (Number of participants as of the end of the fiscal year) 5,674		Encourage use of Kansai Electric Power environmental household account books both inside and outside the company	8,600	-	Encourage use of Kansai Electric Power environmental househol account books both inside and outside the company		onmental household the company	P. 32		
D Ir	nitiatives toward the achievement of a so	und material-cycle society									
	Improving the recycling rate of industrial 99.3%		More than 99% (up to FY 2009)	98.7%	△*5	5 More than 99.5% (up to FY 2012)		2012)	P. 28		
Ш Ш	Proper processing of PCB wastes *6 Processed volume: Low-concentration PCB: 47 thousand kL (cumulative total) High-concentration PCB: 938 units (cumulative total)		Process all PCBs by the legal deadline (by 2016)	Processed volume: Low-concentration PCB: 57 thousand kL (cumulative total) High-concentration PCB: 1,403 units (cumulative total)	-	Process all PCBs by the legal deadline (by 2016		Process all PCBs by the legal deadline (by 2016)		ine (by 2016)	P. 28
li li	itiatives toward a trusted, environmental	ly advanced corporation									
	Further introduction of systems in compliance with ISO or other certifications (compliant locations at fiscal year-end)		roduction of systems in compliance r other certifications (compliant 13 locations 13 locations numbers of locations		0	Support of and expansion to appropriate numbers of locations		propriate	P. 33		
	Maintaining sulfur oxide (SOx) and SOx nitrogen oxide (NOx) emission levels	Emissions per basic unit Overall 0.029 g/kWh Thermal 0.072 g/kWh	Maintain current status (Reference) 5-year averages for FY 2004–FY 2008 0.02 g/kWh (overall) 0.06 g/kWh (thermal)	Emissions per basic unit Overall 0.012 g/kWh Thermal 0.035 g/kWh	0	Maintain current status (Reference) 5-year averages for FY 2005–FY 2009 0.02 g/kWh (overall) 0.06 g/kWh (thermal)		005–FY 2009 h (thermal)	P. 29		
	proportional to the volume of electric NOx power generated	Emissions per basic unit Overall 0.046 g/kWh Thermal 0.113 g/kWh	Maintain current status (Reference) 5-year averages for FY 2004–FY 2008 0.04 g/kWh (overall) 0.12 g/kWh (thermal)	Emissions per basic unit Overall 0.035 g/kWh Thermal 0.100 g/kWh	0	(Reference) 0.04 g/k	Maintain current status 5-year averages for FY 2 Wh (overall) 0.11 g/kW	005–FY 2009 h (thermal)			
	Measured dosages of radioactive gaseous waste in public areas around nuclear power plants	Less than 0.001 millisieverts/year	Less than 0.001 millisieverts/year	Less than 0.001 millisieverts/year	0	Les	s than 0.001 millisieverts	:/year	-		
ß	Item Beducing office ele	ctricity consumption Reducing office water	consumption *8 Improving fuel efficiency of company vehicles	Reducing convinger consumption Improving the green	nurchasing rate f	or office supplies *9					

ervation activities	Pro
ource conser	Prc fi (E
yy and res	



*1: Takes CO2 credits into account as provided for under the Kyoto Mechanism. Figures in <> marks indicate CO2 emissions factor before taking CO2 credits into account.

*2: We raised our target from "44% or more" to "45% or more" in anticipation of improvements in the thermal efficiency rate resulting from installation of combined-cycle equipment at the Sakaiko Power Station and startup of the Maizuru No. 2 unit.

 \pm 3: Tracking of the amount of gas in devices prior to SF6 gas removal work, which serves as the basis for calculation of the recovery rate, was previously done using the values inscribed on the devices themselves, but has recently been conducted using the "gas pressure conversion method," using the device's SF6 gas enclosure amount and the pressure.

*4: Regarding values for reduction of customer CO2 emissions through diffusion and expansion of EcoCute and other water heaters, we changed to use of a combined value for EcoCute and electric water heaters. The formula used for calculation is: [Amount of CO₂ emissions reduction] = [number of EcoCute units registered to customers (increase in number of units for the fiscal year)] x [annual amount of CO₂ emissions from conventional water heater models] – [annual amount of CO₂

Progressive Approach to Environmental Problems

(Self-evaluation) \bigcirc : Target achieved \triangle : Target mostly achieved \times : Target not yet achieved -: Unable to evaluate (e.g. because target is for a date several years in the future)

emissions from EcoCute] + [number of electric water heater units registered
to customers (increase in number of units for the fiscal year)] x [annual
amount of CO2 emissions from conventional water heaters] - [annual amount
of CO2 emissions from electric water heaters]. In terms of results, for the CO2
emissions factor for the fiscal year in question taking CO2 credits into
account, figures in parentheses are Kansai Electric Power's CO2 emissions
factor targets (approximating the 5-year average of 0.282 kg-CO2 (kWh) for
FY 2008-FY 2012).

- *5: While there was a major reduction in the amount of industrial waste generated, there was an increase in the amount of difficult-to-recycle waste generated as a result of regularly scheduled plant inspections, and we fell slightly short of our target. Regarding this industrial waste, we have already switched over to a contract with a waste management company capable of recycling it, and from FY 2010 onward a drastic reduction in the amount of
- landfill waste is expected. *6: The results for treatment of "high-concentration PCB waste" are based on "amount of waste delivered to Japan Environmental Safety Corporation treatment facilities."
- *7: In terms of the CO₂ conversion for amount of office electricity use, amounts are the FY 2009 CO2 emissions factor with CO2 credits taken into account, while figures in parentheses are Kansai Electric Power's CO2 emissions factor targets (approximating the 5-year average of 0.282 kg-CO2 (kWh) for FY 2008-FY 2012).
- *8: Scope of calculations has been revised in accordance with water use results. *9: Fourteen items have been added as a result of government measures to address recycled-paper content falsification (31 items \rightarrow 45 items).



Becoming a main player in the drive for a low-carbon society

Kansai Electric Power Group's unique comprehensive measures

Kansai Electric Power Group has formulated the Kansai e-Eco Strategy, which builds on our New ERA Strategy, as a part of the newly formulated "Kansai Electric Power Group Long-term Growth Strategy 2030." The Kansai e-Eco Strategy includes comprehensive promotion of the goals of "accelerate conversion to low-carbon electricity," "contribute to energy conservation, cost reductions and CO₂ reductions by customers and society," and "construct the Kanden Smart Grid." The Group is also undertaking "activities abroad" and "development of advanced technologies." This brings us closer to realization of a sustainable, low-carbon society.



Accelerate conversion to low-carbon electricity

Kansai Electric Power Group takes a wide variety of measures aimed bringing customers electricity with lower CO₂ emissions, including promoting "safety first" operations at nuclear power plants, maintaining and expanding hydroelectric power generation, proactively adopting renewable energy sources, and maintaining and improving the thermal efficiency of thermal power plants.

Setting targets aimed at reducing the CO₂

Kansai Electric Power has been promoting comprehensive strategies

with the goal of reducing the amount of CO₂ emissions proportional

to the amount of electric power consumed (sold), known as the CO2

emissions factor

emissions factor. As a result, CO₂ emissions factor reduction has reached the highest standards in the industry, but with the goal of establishing an even lower-carbon power grid, we are challenging ourselves to reduce emissions by a five-year average of 0.282 kg-CO₂/kWh over the first commitment period of the Kyoto Protocol (FY 2008–FY 2012), and are promoting further efforts.

Results of CO₂ emissions factor reductions

Through expanded use of nuclear power generation and other factors, the CO₂ emissions factor for fiscal 2009 was $0.265 \text{ kg-CO}_2/\text{ kWh}$, lower than that of fiscal 2008.

* This is a provisional value. The government will officially announce actual values, based on the Law Concerning the Promotion of the Measures to Cope with Global Warming, etc.



Promoting nuclear power generation

Because it does not emit CO_2 during generation, nuclear power generation is a valuable means of reducing global warming. Moreover, the uranium used in nuclear power plants as fuel can be imported from a number of politically stable countries, assuring stability of supply and economic viability. For these reasons, Kansai Electric Power is actively promoting nuclear power, placing the highest priority on the safe and stable operation of nuclear power plants.

Japan's Basic Energy Plan, approved by a Cabinet resolution in June 2010, also focuses on active promotion of nuclear power as a main energy source over the mid- to long-term, with safety as a top priority and the trust and understanding of the nation's citizens as a prerequisite.

Stable operation and improved capability of hydroelectric power generation

Hydroelectric power generation is a purely domestic Japanese energy source, excellent in terms of both stability of supply and economic efficiency. In addition, like nuclear power, it has earned accolades because it emits no CO₂ during generation. Kansai Electric Power will continue stable operation of hydroelectric power generation facilities by carrying out appropriate maintenance, boost output at our existing facilities, and promote the switch over to variable-speed operation at pumped-storage hydropower plants and development of small- and mid-scale hydroelectric power generation, with the goals of flexible response to supply and demand fluctuations and further mitigation of the environmental load.

A new hydropower plant making effective use of existing equipment

(Shin-Kuronagi No. 2 Power Station (tentative name) construction project)

As a part of efforts to further promote electricity with low CO₂ emissions, Kansai Electric Power is currently planning a new hydropower plant that will utilize excess flow from the driving channel of the existing Kuronagi No. 2 Power Station (Unazuki, Kurobe City, Toyama Prefecture). With a maximum output of 1,900 kW, the plant is scheduled to commence operation in 2012. Realization of this project will achieve a 3,600-ton annual reduction in CO₂ emissions.



Promoting the switch over to variable-speed operation at pumped-storage hydropower plants

At Units 1 and 2 of the Okutataragi Power Station, we are planning to replace the fixed-speed system with a variable-speed system. This will allow adjustment of the network frequency, and in turn help curb the operation of thermal power plants that support frequency adjustment during nighttime hours. In FY 2009, Kansai Electric Power's efforts toward development and adoption of variable-speed pumped-storage hydropower systems earned high acclaim, and the Company was awarded the Environment Minister's Award for Global Warming Prevention in conjunction with Hitachi Ltd.

Maintaining and improving the thermal efficiency of thermal power plants

Kansai Electric Power is pursuing ongoing measures in both facilities and operations in order to maintain and raise thermal efficiency, to save fossil fuels and as a result, reduce CO₂ emissions. At the Sakaiko Power Station, we are presently pursuing a facility renewal plan that will incorporate state-of-the-art, 1,500°C-class combinedcycle power plants, improving thermal efficiency from its current 41% to 58% and reducing the CO₂ emissions factor. Units 1 through 4 commenced commercial operations in 2009, with Unit 5 scheduled to go online in September 2010. Also, at the Himeji No. 2 Power Station, our largest plant, we are making progress on a facility renewal that will employ a 1,600°C-class gas turbine. The planned new equipment will bring thermal efficiency from its current 42% to approximately 60%, among the world's highest, and allow for significant reductions in the CO₂ emissions factor.

2

Actively introducing renewable energies

Promotion of independent development of renewable power generation

Ten electric power companies, including Kansai Electric Power, plan to develop mega solar power plants in about thirty locations nationwide with a total power output of approximately 140 MW. They will be used to verify the technical impact of large-scale introduction of solar power into the power grid in the future, as well as to encourage further expansion of solar power.

Kansai Electric Power is constructing the first mega solar power generation plant on the Sakai City waterfront, tentatively named Sakai No. 7-3 District Mega Solar Power Generation Plant (rated output: 10 MW; estimated CO₂ emissions reductions per year: approx. 4,000 tons), which on completion will be one of the largest solar plants in Japan. A portion of the facility is scheduled to commence operation in November 2010 and start verification tests soon after, with the entire facility going online in October 2011. In addition, Kanden Energy Development Co., Inc., a wholly owned subsidiary of Kansai Electric Power, has embarked on a wind power project with a rated power output of 24 MW in the northern part of Awaji City, Hyogo Prefecture.



Sakai No. 7-3 District Mega Solar Power Generation Plant (tentative name)

Purchasing of surplus solar power

Kansai Electric Power encourages the spread of solar power in communities and private residences, and through the feed-in tariffs (FIT), purchases surplus electricity (power generated by solar panels but not used at their place of installation) from customers.

Mixing in biomass fuel before combustion at Maizuru Power Station

In August 2008, Kansai Electric Power began using wood pellets, a biomass fuel, with the coal burned at the Maizuru Power Station thermal plant. This allows for decreased coal consumption, and results in an annual CO₂ emissions reduction of approx. 92,000 tons.

Contribute to energy conservation, cost reductions and CO₂ reductions by customers and society

Kansai Electric Power offers customers a wide range of energy-saving proposals to encourage efficient energy use throughout society, and also strives to cut energy use and CO₂ emissions at our bases of operation.

Providing optimum solutions for reduced energy consumption, costs and CO₂ emissions

Kansai Electric Power meets customer needs for energy efficiency, cost savings and CO2 reductions, and contributes to the realization of a low-carbon society by working actively to promote widespread adoption of heat pumps and other high-efficiency devices and systems.

For our individual customers, we proposed the concept of "totally electric homes plus," which synergistically combines environmentally efficient products and services such as solar power and electric vehicles with safe, comfortable and economical "totally electric homes" incorporating environmentally superior EcoCute water heaters. For our corporate customers, we offer systems that optimize energy use by combining low-CO₂-emissions electric power with high-efficiency electric devices such as heat pumps, helping to find solutions to the challenges facing customers.

Totally electric homes + solar power

The combination of totally electric homes incorporating EcoCute, which uses heat extracted from air warmed by the sun, and solar power, is proposed as an optimum solution to the issue of CO₂ emissions. Both systems employ renewable energy, and the combination of them enables even greater reductions in CO2 emissions.

Providing a variety of information about energy conservation

Kansai Electric Power offers a wide variety of services aimed at helping customers use energy more efficiently, such as the "environmental household account book" tool and helpful tips on energy conservation for individual customers, as well as a variety of services tailored to the life cycle of facilities, such as energy-saving diagnostic services and energy management support, for corporate customers.

Providing information about saving energy through Web sites and pamphlets

Kansai Electric Power distributes pamphlets that explain how customers can use energy wisely, and the Company's Web site also includes a section that introduces tips and fun ways to help customers conserve energy more efficiently.

Web Enjoy Sho-ene Life: The Ekoda family's energy-conservation lifestyle http://www.kepco.co.ip/sho-ene/

Domestic Credit System initiative

Kansai Electric Power participates in efforts to reduce CO₂ emissions in accordance with the Japanese government's Domestic Credit System. As of the end of March 2010, the Company has participated in six joint projects registered by the Domestic Credit Certification Committee. These projects are expected to lead to an estimated 2,501-ton annual reduction in CO2 emissions. Among them is a project to reduce CO₂ emissions by introducing heat pumps for use in landscaping facilities, implemented in conjunction with the Heguri Greenhouse Rose Association (Heguri, Ikoma-gun, Nara Prefecture). Through this project, in April 2010 the Company obtained its first domestic credit for 295 tons.



Energy conservation and CO₂ emissions reduction at Company bases of operation

Energy management at bases of operation

In order to further reduce energy consumption at Kansai Electric Power bases of operation, in fiscal 2007 we introduced the "energy management" program at some of our business locations. At these locations, the daily energy consumption is measured, data is confirmed and analyzed on a regular basis, and effective energy conservation strategies based on that data are put into place.

In fiscal 2009, we increased the number of locations by one to 18 locations. By optimizing operations through raising staff awareness, and universally implementing measures that were found to be particularly effective, we have achieved a 4% reduction in electric power consumption in comparison with the previous year. In the future, we intend to accumulate and make use of further knowledge about energy use suited to the characteristics of buildings and successful measures to reduce this use, and apply this knowledge effectively at locations where energy management has not yet been implemented.

Active adoption of electric and plug-in hybrid vehicles

Electric vehicles emit no NOx (nitrogen oxides), SOx (sulfur oxides) or CO2 while on the road. Plug-in hybrid vehicles also emit considerably less CO₂, NOx and SOx while on the road, and have low environmental impact.

In order to cut the amount of CO₂ emitted by company vehicles, Kansai Electric Power has set a target of introducing a total of 1,500 electric and plug-in hybrid vehicles by 2020. As one of the first steps. the Company plans to introduce 200 such vehicles by fiscal 2011. In fiscal 2009 a total of 111 vehicles-86 electric vehicles and 25 plugin hybrid vehicles-were introduced at offices, including sales offices, power plants, and power stations, and 200 V chargers and rapid chargers have been installed, helping to encourage the use of these vehicles in daily operations.

Construct the Kanden Smart Grid

The Kansai Electric Power Group aims to contribute to the achievement of a low-carbon society and a better energy environment for customers through the construction of a smart grid (next-generation electricity transmission network).

What is the "Kansai Electric Power smart grid"?

The concept of the smart grid has gained widespread prominence recently. The Kansai Electric Power Group has positioned the smart grid as a key to achievement of an electricity transmission system high in efficiency, quality and reliability, employing advanced information, communications and storage cell technology to achieve a low-carbon society and a better energy environment for customers without sacrificing the stability of the basic electric power grid.

A stable supply of electricity with low CO₂ emissions

In the future, should renewable energy sources with unstable output, such as solar power generation, supply power in a large-scale or centralized fashion, there are concerns that it could adversely affect the stability of the electric power grid (in terms of electricity quality factors such as voltage and frequency). In order to avert such a situation, Kansai Electric Power intends to pursue the construction of a smart grid, including maintenance and renewal of thermal and pumped-storage hydroelectric power generation and distribution facilities fulfilling the function of supply control, to deliver stable electricity with lower CO₂ emissions.

Research on a power supply control system employing storage cells

It is important to maintain a reliable power supply in the event that a large amount of energy from renewable sources such as solar power, which fluctuate drastically over short periods of time, is introduced to the power grid. Starting in fiscal 2010, Kansai Electric Power has been engaged in research on a power supply control system employing storage cells at the Ishizugawa Substation, which is linked to the Sakai No. 7-3 District Mega Solar Power Generation Plant (tentative name).

Construct the Kanden Smart Grid



A better energy environment for customers

In order to provide a better energy environment and support energysaving for customers, Kansai Electric Power is making efforts to introduce new measurement systems and visualize energy consumption patterns, while also considering other potential services.

Support for visualization of energy consumption patterns

In order to facilitate reductions in energy consumption, costs, and CO₂ emissions resulting from customers' electricity use, Kansai Electric Power offers a service to inform customers of how much energy they use each month and in the past 15 months, as well as the CO2 emissions resulting from this use, on our Web site.

When this service is used, electricity consumption and expenses are automatically transmitted to the environmental household account book ("Eco e-Life Check").

(See p. 47 for details on the environmental household account book ("Eco e-Life Check").)

Web Service informing customers of electricity use: http://www.kepco.co.jp/service/miruden/

Initiatives toward new metering systems

In recent years, much attention has been paid to "smart meter" electric meters. Since 1999, before the phrase "smart meter" had yet gained currency, Kansai Electric Power has been engaged in research and development on new measurement systems. These systems, making use of nextgeneration meters employing communications technology, optical fiber networks, and other such technologies are intended to provide customers with better service and boost the efficiency of business operations. With their introduction, customers' electricity use is measured in 30-minute units, supporting effective equipment configurations tailored to electricity use patterns and more precise energy consulting.



Activities abroad

Making use of the technological capabilities, knowledge and expertise that we have gained through years of operation as an electrical power supplier, the Kansai Electric Power Group is undertaking a wide range of activities abroad to contribute to the mitigation of global warming on a global scale. Our efforts employing the CDM (Clean Development Mechanism) and other Kyoto Mechanisms are contributing to reductions in the CO₂ emissions factor.

Overseas projects by the Kansai Electric Power Group



Environmental afforestation project in Australia

Kansai Electric Power is carrying out a multiple-benefit environmental afforestation project in Australia, aiming for simultaneous mitigation of soil salination, mitigation of global warming and improved biodiversity. We have planted belts of mallee eucalyptus trees approximately 10 meters wide over a combined 900 kilometers or so in length, on farm and pasture land leased near Perth in the state of Western Australia. About 1,000 hectares in area, the tree belt contains as many as 2.5 million trees.

Location	Perth, Australia
Participating corporations	Kansai Electric Power, The General Environmental Technos, Oil Mallee Company (CO ₂ Group)
CO ₂ absorption amount	Approx. 860,000 t-CO2 (over 20 years)
Period of participation in project	2003 to 2022



Part of the malee eucalyptus forest, planted in belts

Hydroelectric power CDM project in China

This project entails the construction of the Kanfeng and Luertai hydropower stations on a tributary of the Yellow River in southern Gansu Province, China, and sale of the power generated to local electricity suppliers. Both the Kanfeng Hydropower Station Project (total output: 15 MW) and the Luertai Hydropower Station Project (total output: 12.2 MW) are registered as CDM projects by the UN, with CO₂ credits being issued for the Luertai project, helping to reduce the Company's CO₂ emissions factor.

Location	Southern Gansu Province, China
Participating corporations	Kansai Electric Power, Gansu Gongjiaotou Kanfeng Hydropower Development, Lintan Luertai Hydroelectric Power
Reduced amount of CO ₂ emissions	Kanfeng: Approx. 52,000 t-CO ₂ /year Luertai: Approx. 42,000 t-CO ₂ /year
Period of participation in project	2006 to 2012



Luertai Hydropower Station

Senoko Power Station Stage II Repowering Project

In September 2008, Kansai Electric Power and other companies purchased shares in Senoko Power Limited, Singapore's largest electricity supplier. Currently, work is underway on the conversion of Senoko Power Station's existing oil-fired steam thermal plants, with a total capacity of 750 MW, to combined-cycle natural gas turbines of with a total capacity of 860 MW. This project will benefit the environment by expediting efficient energy use and bringing about major reductions in CO₂ emissions. Using the power-plant-related technological expertise we have amassed through our domestic and international electricity business activities, the Company intends to continue contributing to the steady implementation of such repowering projects.

Ming-Jian Hydropower Project

Ming-Jian Hydropower is an independent power producer (IPP) in Taiwan, which was tendered by the Taiwanese government in 2003 as a 25-year BOT (build-operation-transfer) project. Ming-Jian power plant with the capability of generating 16.7 MW takes advantage of potential head of existing irrigation canal. Under a power purchase agreement in accordance with the Taiwanese renewable energy purchasing criteria, all of the electricity generated is sold to the Taiwan Power Company, contributing to the Taiwanese government's promotion of renewable energy use. Kansai Electric Power holds approximately 30% of shares, and makes use of its technical skills acquired in rich experience of the domestic hydropower operation and maintenance to maintain and improve the safe and stable operation.

Tuvalu Solar Power Generation Project

At an elevation of only two meters above sea level, the island nation of Tuvalu is under threat of sinking beneath the ocean due to rising sea levels caused by global warming and other factors. As part of its environmental preservation activities with e8 (a conference of the world's major electric power companies), the Company has installed a 40 kW solar power generator in Tuvalu's capital Funafuti, and is working to pass along our construction, engineering and operation know-how. The solar power generator commenced operation in February 2008, and the Company participated over the next two years by monitoring operations and providing support for the power station.

Progressive Approach to Environmental Problems

Location	Singapore
Participating corporations	Kansai Electric Power, Marubeni, GDF SUEZ, Kyushu Electric Power, Japan Bank for International Cooperation
CO ₂ emissions per basic unit reduced	Before facility renewal = 0.72 kg-CO ₂ /kWh After facility renewal = 0.38 kg-CO ₂ /kWh
Period of construction	Dec. 2009-Aug. 2012 (scheduled)





Senoko Power Station



Computer rendering of facility after renewal

Location	Ming-Jian, Nantou County, Taiwan
Participating corporations	Kansai Electric Power, Dong Jin Enterprise, others
Amount of CO ₂ reduced	Approx. 48,000 t-CO ₂ /year
Period of participation in project	2005 to 2029



Interior of Ming-Jian Hydropower Station

Location	Funafuti, Tuvalu
Participating corporations	Kansai Electric Power, Tokyo Electric Power, Tuvalu Electricity Corporation
Amount of CO2 reduced	Approx. 50 t-CO ₂ /year
Period of participation in project	2007 to 2010





Tuvalu's capital Funafuti

Development of advanced technologies

The Kansai Electric Power Group makes maximum use of the technological expertise we have acquired as an electric power supplier, contributing to the achievement of a low-carbon society through the development of cutting-edge technology such as CO₂ capturing and storage technology and highefficiency electric devices.

Development of CO₂ recovery and fixation technoloav

Separation and recovery of CO₂ in exhaust gases

Since 1990. Kansai Electric Power has been collaborating with Mitsubishi Heavy Industries, Ltd., on the development of CO2 separation and recovery technology that employs a process of chemical absorption to separate and recover the CO₂ from exhaust gases resulting from thermal power generation. In 1994, the Company's continuing research resulted in the development of a new CO₂ absorption solvent, KS-1, the world's most efficient and a superior replacement for the conventional solvent, monoethanolamine. With this solvent, the energy needed for CO2 recovery was reduced from the previous 900 kcal/kg-CO2 range to around 700 kcal/kg-CO₂. We are currently engaged in developing a new absorption solvent that will reduce CO₂ recovery energy to a level even lower than KS-1.

From an application standpoint, we have also succeeded in boosting the system's effectiveness and developing a low-cost

chemical absorption process. The technology is currently used at 9 locations worldwide, primarily in fertilizer plants, and its use is growing outside Japan in particular due to its effectiveness in cutting costs in various fields, such as enhanced oil recoverv



Trademark registered July 2007 Trademark registration applied for in other countries (USA, Canada, countries in the EU, Norway, etc.)

Participation in a geological CO₂ storage and fixation technology development project

In May 2008, the Company joined other electric power suppliers in establishing Japan CCS Co., Ltd., and is participating in government-sponsored CCS (carbon capture and storage) research efforts. At present, the project is at the stage of selecting sites for

Overview of main CCS technologies being considered in Japan



CCS verification tests. We intend to continue playing an active role in large-scale verification tests under the auspices of the central government, and pursuing the development of CCS-related technologies.

Development of high-efficiency electric devices

Kansai Electric Power has long been engaged in research and development efforts to further boost the efficiency of heat pumps, and to expedite their use in a wider range of fields. For example, in recent years the Company, in partnership with Chubu Electric Power Co., Inc., Tokyo Electric Power Company and Kobe Steel Ltd., has been working to answer calls from factory personnel for highertemperature hot water heat pumps. The result is the industry's first hot water heat pump with not one but two screw compressors used to raise the temperature of refrigerant. This heat pump is capable of supplying 70°C to 90°C hot water and 5°C to 30°C cold water. When simultaneously supplying 90°C hot water and 7°C cold

water, the total COP (coefficient of performance) is 4.5, meaning it is possible to extract heat energy equivalent to 4.5 times the energy consumed. Since April 2010, this hot water heat pump has been commercially available as the HEM-HR90 sold by Kobe Steel.



HEM-HR90: total COP of 4.5 when simultaneously supplying 90°C hot water and 7°C cold water

Development of power system operation and control technology

Because renewable energy sources such as solar power are characterized by major fluctuations in output over short periods of time due to climatic conditions and other factors, there are concerns that a massive or highly concentrated inflow into the power grid could adversely affect the stability of the electric power grid (in terms of voltage, frequency, etc.). With this in mind, Kansai Electric Power is working to verify the actual effects of such power generation on the power grid, as well as to develop new technologies of power system operation and control.

Assessment of the effects of solar power generation on the power grid

By collecting data and monitoring sunlight levels in various areas, we are making efforts to gain a clearer understanding of the potential of smoothing output throughout the Kansai region and the output fluctuations caused by sudden weather changes in specific areas, as well as the scope of solar power generation output fluctuations in comparison to demand on an yearly basis. Based on this data, we are formulating solar power generation output forecast methods, estimates of the power generation adjustment capability needed to suppress frequency fluctuations, and measures to address areaspecific voltage fluctuations. The accurate forecasting of solar power output presents a difficult challenge, but we intend to push for increased precision so as to eventually be able to reflect predictions in daily supply and demand schedules.

In addition, with the potential introduction of storage cells into the electric power grid in mind, we are pursuing the development of technologies such as power supply control systems employing storage cells. While practical technological issues related to large scale storage cells needed for power supply control exist, we will continue the steady pursuit of basic research in this area.

Initiatives toward the achievement of a sound material-cycle society

Efforts to achieve zero emissions

Kansai Electric Power is working to promote the recycling of industrial waste generated by business activities, with the goal of achieving zero emissions, and a target of an industrial waste recycling rate of 99.5% or higher by fiscal 2012.

Improving the recycling rate of industrial wastes

Kansai Electric Power promotes efforts related to the three Rs throughout all its operations. For example, waste-concrete utility poles are recycled as roadbed materials, and 100% of the coal ash produced by the Maizuru Power Station is recycled as raw material for cement. Regarding glass, a material with limited recycling applications, the Company has been pursuing research and development, and starting in fiscal 2010 will be capable of recycling almost 100% of insulators used.

Changes in emissions and recycling rates for industrial wastes



* Industrial waste recycling rate (%) = (industrial waste emissions - landfill disposal amount) / industrial waste emissions × 100

Some of the main applications of recycling of industrial waste. etc.



Recycling of insulator scraps



While insulator scraps can be recycled as road-paving and other materials conventional methods leave scraps with sharp edges that limit their possible applications. With this in mind, Kanden L&A Co., Ltd., part of the Kansai Electric Power Group, has developed a new type of polishing device that makes it possible to recycle insulator scraps without leaving sharp edges, which is expected to enable a recycling rate of almost 100%.

PCB waste processing

Since April 2004, Kansai Electric Power has been processing pole transformers at our Recycling Center for Utility Pole Transformers to appropriately handle low-concentration PCB wastes in insulation oil and transformer cases. In addition, for high-concentration PCB wastes, such as high-voltage transformers and condensers, we have contracted the Japan Environmental Safety Corporation to process these items starting in October 2006.



Processing of low-concentration PCB wastes (pole transformers) (as of March 31, 2010)

	Insulation oil (10,000 kL)	Transformer cases (10,000 units)	
Volume to be processed	Approx. 10	Approx. 24	
Volume processed so far (cumulative)	5.7	12.7	

Processing of high-concentration PCB wastes (high-voltage transformers and condensers) (as of March 31, 2010)

Volume to be processed	5,534 units
Volume processed so far (cumulative)	1,403 units

Mobile decontamination treatment technology for waste electrical equipment containing trace lowconcentration PCBs

Since it was determined that some equipment, such as transformers, were contaminated with trace amounts of PCBs. Kansai Electric Power has been working on research and development of processing technology for safe decontamination of such equipment, and in fiscal 2008 underwent evaluation by the PCB Processing Technology Evaluation Committee (Ministry of the Environment), receiving technological accreditation for this technology. In fiscal 2009, the Company developed a mobile decontamination treatment system to remove harmful materials from large and immovable equipment on-site, and both safety and adequate decontamination capabilities were confirmed through on-site verification testing.

Green purchasing efforts

Kansai Electric Power is conducting green purchasing activities in which products and services with minimum environmental impact are given priority. Specific measures include the creation of a "green procurement manual" and setting of company-wide targets. In the area of office supplies, we have maintained a nearly 100% green purchasing rate for some time, and in terms of green purchasing of electric wires, transformers and other equipment for electric power facilities, we are making every effort to use environmentally friendly materials.

Green purchasing rate				
Target	Results (FY 2009)			
	Overall (4	5 items)	97%	
		Copy paper	99%	
Nearly 100%		Stationery supplies (28 items)	90%	
		Fixtures (11 items)	92%	
		Office equipment (5 items)	100%	

Green purchasing of office supplies

Initiatives toward a trusted, environmentally advanced corporation

Promotion of community environmental protection measures

At Kansai Electric Power, we conduct comprehensive efforts to protect the community environment, including preventing atmospheric pollution and water quality contamination. We also take appropriate measures to prevent chemical substances from harming people and the environment.

Environmental protection measures at power plants

At our power plants, we undertake measures based on laws. regulations, environmental protection agreements and other rules to reduce atmospheric pollution, water quality contamination, noise. vibrations and other problems. In addition, we monitor and measure the air and seas around our power plants and carefully evaluate the environmental effects of our operations on the regional environment to ensure that no problems occur.

Air pollution prevention measures (NOx, SOx, soot)

Kansai Electric Power has implemented measures aimed at reducing the volume of SOx (sulfur oxides) emitted by our thermal power plants, such as using fuels with lower sulfur content and installing sulfur scrubbers. To address the issue of NOx (nitrogen oxides), we are taking steps to lower emission levels, including installation of nitrogen scrubbers and improvement of combustion methods. As a result, our SOx and NOx emissions proportional to the volume of electric power generated are ranked among the lowest in the world. In addition, we have installed high-performance electric filters, drastically cutting soot emissions.

Thermal power generation and SOx emissions



Thermal power generation and NOx emissions



SOx and NOx emissions per unit of thermal power generated



Japan figure: Federation of Electrical Power Companies of Japan

Implementing environmental assessments

An environmental assessment is a consultative process with respect to the environmental impact of a company's business activities. The company's operations are measured and evaluated to determine the degree of their environmental impact. The results are disclosed to the regional community and opinions are canvassed. These findings inform the company's environmental efforts and are reflected in its operating plans.

At the Himeji No. 2 Power Station, we conducted an environmental assessment between May 2007 and March 2010 in conjunction with an ongoing facility renewal that will incorporate a state-of-the-art, combined-cycle power generation method. By employing this highly efficient method featuring a 1,600°C gas turbine, the updated facility will allow for reductions in the CO2 emissions factor and amount of heated wastewater and NOx emissions. We will continue the process of environmental assessment and work to start operations at Unit 1 in October 2013, ensuring that we have the public's understanding at all times.

Computer rendering of Himeji No. 2 Power Station after facility renewal

Inspired by nearby Himeji Castle, a World Heritage site, the new design of Himeji No. 2 Powe Station employs colors that blend harmoniously with the surrounding natural and urbar



Himeii No. 2 Power Station in its current state and post-renewal

Item	Current state	Post-renewal	
Power generation method	Steam power generation	Combined-cycle power generation	
Power plant output 2,550 MW (6 units, 250–600 MW each)		2,919 MW (atmospheric temperature 4°C) (6 units, 486.5 MW each)	
Fuel used	Natural gas	Natural gas	
Power generation terminal thermal efficiency (lower calorific value base)	Approx. 42% Approx. 60%		
CO ₂ emissions factor	0.470 kg-CO ₂ /kWh	0.327 kg-CO2/kWh	
Amount of NOx emissions	453 m ³ N/h	70.8 m ³ N/h	
Amount of heated wastewater	103 m ³ /s	60 m ³ /s	
Scheduled start of operations	Oct. 1963 (Unit 1) to Nov. 1973 (Unit 6)	Scheduled: Oct. 2013 (Unit 1) to Oct. 2015 (Unit 6)	

Measures to prevent soil and groundwater contamination

Kansai Electric Power has produced our own Handbook on Measures Against Soil Pollution, and complies with all laws and regulations relevant to soil contamination. Moreover, our power plants have water- and oil-retaining walls installed, preventing soil contamination from chemicals and fuels such as heavy/crude oil in the unlikely event of leakage.

Efforts to handle asbestos problems

Kansai Electric Power has been periodically monitoring and appropriately managing the condition of facilities identified as containing asbestos and taking appropriate action. We continue to undertake appropriate management and execute carefully planned measures to handle asbestos.

Locations (buildings and equipment) where asbestos is used (as of March 31, 2010)

Application		Location		
Sprayed materials containing asbestos		Thermal insulations, acoustic materials, fire-resistant materials and soundproof materials of transformers		
	Building materials	Flame-retardant boards, roofing and flooring in buildings, etc.		
	Asbestos cement tubes	Tubing for buried cables (power transmission and distribution, communication equipment)		
Products containing asbestos	Thermal insulation	Power generation equipment (thermal, nuclear)		
	Sealants and joint seating	Power generation equipment (thermal, nuclear)		
	Shock- absorbent materials	Suspension insulators for power transmission equipment, etc.		
	Adhesives	Aerial power transmission cables, hydroelectric dams		

Proper handling of chemical substances

In addition to complying with the PRTR Law (Pollutant Release and Transfer Register Law), the Company has prepared a Handbook on PRTR Chemical Management, and we follow its guidelines to ensure the strict management of hazardous chemical substances, and to make efforts to reduce the volume of such substances. In accordance with the PRTR Law, we report to the national government our volumes of chemical emissions and the amounts transported, and regularly make the same information public.

Discharge and transferred chemical substances subject to PRTR Law

Substances	Discharge (t/year)		Transferred (t/year)	
Substances	FY 2008	FY 2009	FY 2008	FY 2009
2-aminoethanol	0	0	13	10
Asbestos	0	0	26	20
Bisphenol A epoxy	<0.1	<0.1	0	0
Ethylbenzene	15	10	0	0
Xylene	30	31	0	0
HCFC-225	4.2	5.6	0	0
Styrene	—	5.3	—	0
Toluene	13	7.4	0	0
Hydrazine	<0.1	<0.1	4.8	4.0
Tris (dimethylphenyl) phosphate	0	0	7.1	13
Dioxins	0.12 (mg-TEQ/year)	0.50 (mg-TEQ/year)	3.5 (mg-TEQ/year)	8.2 (mg-TEQ/year)

* Quantities indicated are for facilities that handle guantities greater than those designated under the PRTR law.

* A "0" indicates no discharge, etc.

* "<0.1" indicates discharge, etc. was less than 0.1 t/vear.

* A "---" indicates that the item is not applicable to any Company facility.

* Displayed to two significant digits

Preservation of biodiversity

When conducting business activities. Kansai Electric Power monitors and analyzes their effect on the environment, and takes steps to preserve biodiversity, taking the specific characteristics of the region into account. For example, when constructing power plants, the Company performs environmental assessments, and minimizes the impact on plants, animals and habitats, while creating natural woodlands using our ecological revegetation method and biotopes that provide habitats for animals. In addition, we work to raise environmental awareness through educational programs making use of these woodlands and biotopes, as well as partnerships and ties with the local community.



A variety of small animals can be seen on the grounds of our power plants (Left: Shrike; Right: Japanese Bush Warbler)



Creation of natural woodlands (ecological revegetation)

The Company is working to create natural environments around our bases of operations, an endeavor rooted in the three fundamental principles of "preserving and protecting nature," "restoring nature," and "creating nature."

In particular, we are engaged in efforts to quickly create natural woodlands using our ecological revegetation method in the largescale open spaces surrounding our power plants. The method involves dense planting of mixed varieties of saplings, particularly of tall tree varieties native to the woodlands of the region, in soil modified and arranged for optimum growth. Trees grow three to four meters in the three years following planting, and seven to eight meters in the first ten years, creating a mature forest more quickly than it would occur naturally. We first introduced the method at Tanagawa No. 2 Power Station in 1977, and we have successfully created a large number of natural woodlands at our power plants. including Gobo Power Station and Nanko Power Station.





Ecological revegetation method

A natural woodland created by Kansai Electric Power using our ecological revegetation method



* Kansai Electric Power maintains vegetated areas, including natural woodlands. covering 78 million m² (30 times the size of the Expo Park in Osaka)

Biotopes

We have been working to create environments (biotopes) around our power plants, with the goal of making good use of the natural resources at our disposal, and creating benefits for surrounding communities in the form of environmental education, connectedness, and social exchange. At the "dragonfly pond" on the grounds of the Sakaiko Power Station, autumn brings a wide variety of dragonflies such as the common skimmer and lesser emperor, while the Okutataragi Power Station biotope in Hyogo Prefecture provides a valuable breeding ground for the endangered forest green tree frog.

The biotope at Himeji No. 1 Power Station is a habitat for fireflies and a valuable environmental education resource for children, with a "nature-watching party" held here each autumn, and opportunities for local elementary school children to release Japanese firefly larvae into the wild.



Himeii No. 1 Power Station

Protection of rare plants on power plant premises

We take steps to protect rare plants found in areas scheduled for power plant construction or renewal work. For example, the barrentwort was discovered growing in such an area scheduled for construction on the grounds of Maizuru Power Station and transplanted to the natural woodland on the power plant premises, and in an area of Sakaiko Power Station where construction work for facility renewal is planned, specimens of the rare small potamogeton panormitanus were discovered and relocated to the "dragonfly pond" biotope. After transplant, the health of the plants is monitored.



transplanted (right)

Future efforts aimed at preserving biodiversity

The Company intends to continue closely following domestic and international trends, and making contributions to the preservation of biodiversity in accordance with the Electricity Utility Industry's Action Guidelines for Biodiversity formulated in April 2010 by the Federation of Electric Power Companies of Japan.

Promoting environmental communication

Committed to the creation of a better environment and the achievement of a sustainable society, Kansai Electric Power is not only weighing various ecological issues, but also working actively with our customers and the regional community to raise environmental awareness. We have divided our efforts into categories depending on the type of customer they target, in the hopes of raising awareness as effectively as possible.

Family-oriented activities

Eco e-Life Check: an environmental household account book

The Kansai Electric Power Web site features the environmental household account book "Eco e-Life Check," a tool used to monitor CO2 emissions and encourage reductions in emissions from households. Users simply input the amount of electricity, gas, water, and so forth that they use in order to calculate their CO₂ emissions.

After registering with Eco e-Life Check online, users can view their own CO₂ emissions volumes on a personalized Web page, and can also use tools for self-evaluation, comparing their results with the average of all members and checking their ranking compared with other users on the site. Families can have fun together as they work to continuously reduce their CO₂ emissions, and can also enjoy twice-monthly Web site updates like useful environmental information in the Eco-Mame section, and messages from members in the "Minna no Hiroba" section. In addition, for every 10 people who register as members, Kansai Electric Power plants one tree, in the hopes of encouraging as many people as possible to join.



Acquisition of the EcoLeaf environmental label

Kansai Electric Power's main product, electric power (grid electricity), has received the EcoLeaf environmental label.

The EcoLeaf environmental label is an environmental labeling system that is operated by the Japan Environmental Management Association for Industry (JEMAI). This system uses third-party verification of quantitative environmental data for the product lifecycle from the gathering of raw resources to disposal and recycling. In July 2003, Kansai Electric Power became the first business in the energy services field to receive this registered and publicly certified label.

Each year, we update our results with the latest available data, and in the future we will continue disclosing environmental information so as to maintain the trust of our customers.

- factor after CO₂ credits are taken into account.
- as published by the government of Japan.
- Management Association for Industry (http://www.jemai.or.jp/english/ecoleaf).

Activities oriented toward the next generation Kanden e-Kids Club

Each year since 2006, children in the fifth and sixth grades in our service area are invited to participate in a series of ecological programs, known as Kanden e-Kids Club. In fiscal 2009, a total of 200 children took part in this program, which encourages them to recognize, find out about and take action on global warming and a wide variety of environmental problems.

Kanden e-Kids Club canvasses for new members every June,

and activities continue from the opening ceremony in July to the program's end in March of the following year. The children take part in activities including hands-on nature experiences, visits to facilities, and the Kids' ISO Program, which encourages children to play a leading role in reducing their families' energy consumption.



A hands-on nature experience

Green Curtain

Since fiscal 2008, Kansai Electric Power has been conducting a campaign to raise environmental awareness using "Green Curtains," led by staff from Company branches and district offices, at regional elementary schools. A "Green Curtain" is a net, cast across an entire window, on which climbing plants are grown, eventually covering the entire window. The curtain is an effective device for reducing

energy consumption: it shades the interior from the sunlight, regulating indoor temperatures, while the plants' evaporating effect cools the surrounding area. Company staff members visit elementary schools, explain the purpose and effects of the Green Curtain and how it is created, and assist the children in planting seedlings of their own.



Planting seedlings for a Green Curtain at an elementary school





Promoting environmental management

The Kansai Electric Power Group has introduced an environmental management system based on the total quality management (TQM) system, and is working to reduce the environmental load of our business activities through continuous improvements.

The Group-wide promotion system

In order to further promote our environmental activities across Group companies, in August 2005 we established the Kansai Electric Power Group Environmental Management Committee, which formulates, checks and reviews Group Eco Actions in conjunction with the Company's CSR Promotion Council's Environmental Board.

In fiscal 2007, we completed maintenance of our risk management system primarily focused on legal risks and covering consolidated subsidiaries, among other areas. We will continue to promote these initiatives and work to reduce both environmental load and environmental risk throughout the Group.

Environmental management promotion system of Kansai Electric Power and its Group companies



* Supervisor for promotion of environmental management activities

Eco Action: Group company concrete action plans

FY 2008 Targets and results in FY 2009 Targets **Evaluation** Item results Targets FY 2010 FY 2011 FY 2012 (Reasons for increase/reduction) Results 1% or more reduction 0.2% decreas Reducing office 1% or more reduction Due to an increase in the number of offices and corresponding compared to the 47.9 GWh electricity compared rise in energy consumption, we were unable to reach our target. ompared to the revious fiscal year to the previous fiscal year consumption We will continue to carry out energy-saving activities. evious fiscal yea 47.8 GWh 0.6% increase 1% or more 1% or more reduction Reducing utility Due to a rise in the volume of water consumed at some of the compared to the previous fiscal year 273,400 m³ reduction water 271,700 m³ compared to the previous fiscal year target offices, we were unable to reach our target. We will ompared to the consumption continue to carry out water-saving activities. evious fiscal yea 1% or more 4.8% improven Improving fuel 1% or more improvement Thanks to the proactive introduction of fuel-efficient vehicles, the fuel compared to the improvement 8 52 km/l efficiency of compared to the efficiency of vehicles improved and we were able to reach our previous fiscal yea print of the print of the previous fiscal year target. We will continue to promote improvements in fuel efficiency. ompany vehicle ous fiscal 8.93 km/L 5.0% increase Owing to an increased workload and other factors, we were Reducing copy Reduce compared to the previous fiscal year Reduce as much 889.3 t as much as unable to reach our targets. We will continue making efforts to use paper possible as possible less paper consumption 933.7 t

* As the number of applicable companies increased during fiscal 2009 from 40 to 44, this report evaluates the results for 44 Group companies.

Observance of laws and regulations

Kansai Electric Power abides by all laws and regulations related to the environment. We also ensure strict compliance with environmental protection agreements concluded with local governments in the areas of our power plants. We did not receive any guidance, notices or orders from any national or local government entity in fiscal 2009 regarding these environmental laws, regulations and agreements, nor were there any violations of said agreements.

A management system conforming to ISO standards

Since fiscal 1997, the Company has utilized an environmental management system (EMS) compliant with the ISO 14001 international standards for environmental management, primarily at our thermal power plants. We have also obtained ISO 14001 external certification for the model business locations we set up for each business format, as shown below.

Business locations acquiring ISO 14001 external certification (as of the end of May 2010)

Kansai Electri	c Power	Group companies
Business format	Business location name	Company name
Electric	Himeji No. 1 Power Station (thermal)	ENEGATE Co. Ltd.
generation	Kainan Power Station (thermal)	THE GENERAL ENVIRONMENTA TECHNOS CO. LTD.
	Nanko Power Station (thermal)	Kanden Engineering Corp.
	Ohi Power Station	KINDEN CORPORATION
Flectric	Himeii Substation	K-Opticom Corp.
power	Electric Power Circulation	NEWJEC INC.
	Division Technical Testing Center	Kanden Plant Corp.

Efforts to raise environmental awareness among our business partners

Kansai Electric Power conducts a wide range of activities to encourage our business partners to pursue environmental initiatives. In fiscal 2009, the Company sent out a mailing to our main business partners encouraging environmental awareness, based on the results of a questionnaire we gave to these business partners. In addition, we sent out information on our environmental household account books

Raising the environmental awareness of employees

Kansai Electric Power conducts a wide range of activities to raise the environmental awareness of employees, so as to promote environmentally friendly business activities.

Employee education

Specialized educational programs

In order to foster human resources that can both understand and act on the Kansai Electric Power Group Environmental Action Plan (see p. 17), we have developed specialized education programs for our staff in charge of environmental issues at each base of operation.

Main educational programs

Training of newly appointed personnel and officials in charge of environmental issues

Cultivation of human resources capable of performing environment-related duties at bases of operation

ISO 14001 staff training / internal auditor training Cultivation of human resources capable of constructing and administering environmental management systems



Internal auditor training

Renewable energies

Renewable energy sources are gifts from nature that can be renewed in a natural environment, such as light and heat from the sun, wind, hydroelectric power, geothermal energy and biomass. Unlike fossil fuels such as oil and coal, there is no risk of drving up, and they are clean energy sources capable of expediting major cuts in CO₂ emissions. Heat from the air, which can be harnessed using heat pump technology, has been recognized as a renewable energy source in the EU and in Japan, and the government is making efforts to encourage its widespread adoption.



General educational programs

The Company is actively promoting awareness by ensuring that all employees are well informed about environmental initiatives in the Kansai Electric Power Group and in society as a whole.

Main educational programs

Environmental e-learning

This is a flexible online educational program. Lectures are conducted about three times a year with creative formats and content, such as lectures held during Environment Month (June).

Challenge training

This training is aimed at encouraging self-development and providing more advanced knowledge. Topics of high interest to employees, such as trends in global warming, are covered, and efforts are made to offer training to as many employees as possible.



Environmental e-learning







Proactive Contributions to Development of Local Communities

Contributing as a member of society

Activities that meet local needs at each business location

Engaging in activities together with local communities

Kansai Electric Power holds a range of events at business locations such as branches and sales offices, to interact with local people in different areas. Below, we introduce just some of the events in which we participate alongside people from the local communities.

We also value our activities together with local communities at nuclear power plants in Fukui Prefecture, which play a major role in providing electricity to the Kansai region, while paying attention to the opinions of local people.





■ The Moriguchi Sales Office holds a ■ The staff of the Namba Sales Office yearly "Fureai Festa" where local children present choral performances and dances

participated as volunteers in the FY 2009 Naniwa Graffiti Cleanup Day organized by a local ward office



The Hanshin Sales Office takes part in a staff of the Hokuriku Branch participated a yearly Christmas party held by a local as volunteers in a festival at an

social welfare institution giving presents

bought with money including donations



institution for severely disabled peo

helping to set up the venue and staff

Many members of staff from the Kansai Electric Power Group ran in the Mihama Itsuki Hiroshi Marathon, which is put on every spring by the town of Mihama, Fukui Prefecture (photo on left). The Mihama Power Station worked together with people from local communities and partner companies in a variety of different ways, such as picking up trash from the course before the race (photo on right)



 Takahama Power Station staff helped with the "Wakasa-Takahama Fishing
Ohi Power Station staff took part in the preparations for the Super Ogase Festival in Uchiura" event, from setting up the venue to measuring catches and organizing records.



summer fire festival held in the local town of Ohi, including making the huge

Electrical equipment checkups at local cultural properties

In collaboration with local fire departments and other organizations, Kansai Electric Power checks electrical equipment at cultural properties such as shrines and temples. Staff check for electrical leaks and wiring faults, and advise customers on the safe use of electricity in accordance with their equipment. Equipment inspections

are also offered to elderly people living alone and social welfare facilities.



Staff of the Wakayama Sales Office inspecting wiring and lightning rods in temples and shrines designated as national treasures

Cleanup activities in cooperation with local communities

Each business location holds cleanup activities together with local residents to help beautify the local environment. As well as cleaning up around the site, staff work together with local governments, neighborhood associations, and other groups in wide-ranging cleanup activities covering beaches, rivers, tourist spots, and welfare facilities.

Support for Kansai culture, art, and sports

Kanden Collabo Art 21

Since 2001, Kansai Electric Power has been holding the Kanden Collabo Art 21 public art exhibitions in collaboration with the Tanpopo-no-ye Foundation, with the aim of creating the opportunity for people with disabilities to express themselves through art and participate more actively in society. In FY 2009, the ninth year of the event, almost 1,000 works were submitted from the entire Kansai region. As well as supporting social participation by disabled people, selected works formed a traveling exhibition that visited nine venues in the Kansai region for four months from late November, in conjunction with Disabled Person's Week, with the aim of enabling as many people as possible to experience the appeal and possibilities of these works of art.

Classical music concert

Kansai Electric Power has held a yearly classical music concert since 1988 as part of its cultural promotion activities in the Kansai region. The FY 2009 Kanden Classical Special "Invitation to the Opera" was a performance of Puccini's opera Madame Butterfly. Around 2,500 people were invited to attend free of charge over two days, allowing

them to experience marvelous singing voices and performances. Yearly classical concerts are also held at different branches.



FY 2009 performance in The Symphony Hall (Osaka)

Sponsorship of college American football in Kansai

Kansai Electric Power is supporting American football. a popular college sport in Kansai. We sponsor the Kanden Flashbowl Series of matches held in spring and fall, and are working to promote American football among Kansai students.



Kanden Flashbowl Series

Support for employees engaged in activities contributing to society

Social Contribution Activities Support System dating from 1992

To support employees who engage of their own accord in community activities or volunteer programs, we encourage them to use our volunteer time-off and matching gift programs. We also provide information on volunteer activities through channels such as in-house publications.

Efforts for regional vitalization

Developing promotional activities to attract businesses to Kansai

As a company developing in step with local communities, Kansai Electric Power seeks to play a role in revitalizing the regional economy and ensuring sustainable development. To achieve this goal, we are collaborating with local governments and business organizations in efforts to encourage new businesses to locate in the Kansai region. In concrete terms, we provide information on industrial parks and incentive systems offered by local governments to companies nationwide that are considering capital investment, and explain the benefits of locating in Kansai.

We also publish the bimonthly magazine Community Information and the "KANSAI Guide to Investment" Web site, containing information on industrial promotion policies by local governments, available industrial sites, and industry-university collaboration projects, as well as the latest information on the attractions of Kansai

Recent years have seen the establishment in Kansai of numerous large, cutting-edge factories related to flat-panel television manufacture, resulting in the formation of what is called "Panel Bay" (a nickname for Osaka Bay), and there is also an increasing number of factories concentrated in environment-related industries such as solar cells and lithium ion batteries. As an even greater concentration of such companies is anticipated in the future, Kansai Electric Power will utilize the services of the Kansai Electric Power Group to develop solutions-oriented activities to attract new businesses

> Web Kansai Guide to Investment http://www.kepco.co.jp/i-park/

Using light to promote urban development

Osaka, located at the center of the Kansai region, has historically been known as the "City of Water" for its numerous canals and rivers. The "Osaka City of Light" project is one initiative making use of this appeal to revitalize the city, jointly promoted by governmental and private representatives under the guidance of the "City of Light" Planning Promotion Committee. Kansai Electric Power is acting as the secretariat for this committee, and is responsible for

Support systems and their results

Volunteer time-off program

Results (FY 2009): 73 instances totaling 213 days

This system allows employees that participate in activities that contribute to society and meet fixed conditions to take 50% or 100% of the time devoted to such activities as specially recognized time off, up to an annual limit.

Volunteer sabbatical program

Utilized by 15 employees from FY 1992 to FY 2009

This program enables employees who have worked for the company for five vears or more to take up to a vear off in order to participate in long-term volunteer work for a public social welfare organization. In the case of the Japan Overseas Cooperation Volunteers, the maximum sabbatical period is two years and six months.

Matching gift program

Results (FY 2009): 5 instances totaling ¥330,000

Under this system, the company makes contributions up to a set limit to match support provided, either by individual employees or collected through workplace fund-raising activities, to public organizations that meet fixed requirements.

planning and promoting the creation of "Osaka City of Light." When three bridges were floodlit during the Aqua Metropolis Osaka 2009 event, we helped to ensure the lighting was appropriate to the Nakanoshima cityscape and acted as the contact point for press releases, contributing to the "Osaka City of Light" project that the governmental and business sectors collaborate in.

We are also deeply involved in the planning and management of Osaka Hikari-Renaissance, now a well-established winter tradition in Osaka. In 2009, thanks to an expanded area and improved content, the number of visitors more than doubled to 3.04 million. As part of the "Osaka City of Light" project, we are also developing links and sharing information with other cities throughout Japan, as well as developing international PR activities. Domestically, many cities in Kansai are engaged in efforts to use light as a tool for urban revitalization, and Kansai Electric Power is helping to promote "City of Light" projects in cities throughout the region in addition to Osaka-for example by hosting a "City of Light Information Exchange Meeting" between Osaka, Kyoto, and Kobe in November 2009.

Internationally, in March 2009, Osaka became the first Japanese city to join the Lighting Urban Community International (LUCI), an international network for creating urban lightscapes. Kansai Electric Power attended the Annual General Meeting held in October that year in Gwangju, South Korea as a representative for the "Osaka City of Light" project, and disseminated information on the project to the international community

If the "City of Light" project becomes a Kansai-wide initiative, and we can disseminate information internationally while working to improve collaboration, this will increase the appeal of the region as a whole. Kansai Electric Power is continuing to play a central role in "City of Light" projects throughout the Kansai region, not just in

Osaka, thus contributing to the region's economic vitalization.

The floodlit Tenjinbashi Bridge during the Aqua Metropolis Osaka 2009 event, and the large fountain in Nakanoshima Park installed during the same period



3



Respect for Human Rights, Development of Favorable Work Environments

Respect for human rights

Basic policy

The Kansai Electric Power Group, aware of the social responsibility it should exercise as a corporation, is engaged in initiatives to deepen a correct understanding and awareness of human rights on the part of every employee in order to eliminate all forms of discrimination, including the *burakumin* issue.

As well as working to develop respect for human rights and a pleasant working environment, we are proactively engaged in activities to create a system with zero tolerance for all forms of discrimination and achieve our goal of being a discrimination-free company. Kansai Electric Power also understands the international agreements and standards regarding human rights, and rejects child labor and forced labor. With respect to sexual harassment and power harassment in the workplace, the Company has established Harassment Consultation Desks and is working toward the rigorous prevention of all types of human rights infringement in collaboration with the Compliance Consultation Desks.

In addition, to ensure the active implementation of such initiatives in collaboration with Group companies, Kansai Electric Power provides support for education and training as well as sharing a range of information on respect for human rights, and is aiming to expand these initiatives further in the future.

Promotion of diversity and creation of comfortable workplaces

Initiatives to encourage the further success of female employees

In accordance with the letter and spirit of the 1986 enactment of the Equal Employment Opportunity Law and the revisions of the same law in later years, we actively recruit women and enable personnel deployment with no distinction of gender. We are placing more women in engineering positions as part of a broader effort to widen the range of positions in which women are employed. In positions of responsibility, the Company evaluates personnel fairly and impartially, basing decisions on individual ability and appropriateness for each position, while avoiding gender-based discrimination. As a result, the number of women employed at Kansai Electric Power is steadily rising.

Supporting the upbringing of the next generation

Kansai Electric Power provides a range of options that enable employees to balance work and home duties, such as leave and flexible work systems.

Main child-raising support systems





Female employees active in technical workplaces

	Number of female employees	Number of female employees in positions of responsibility
Fiscal 2004	71	63
Fiscal 2009	105	79

Leave systems and shortened work hours to support childcare and nursing

To support employees involved in childcare and nursing, we offer a leave system and system of shorter work hours.



The childcare support system helps female employees who are raising children

For example, Kansai Electric Power introduced a childcare leave system in 1991, before this was required by law, and from FY 2010 is extending the system of shorter working hours to cover the period until children start elementary school. This framework is used by almost all eligible female employees as well as a few male members of staff, and is firmly established as a familiar system.

Status of use of childcare support system

Childcare leav

Women: 72 out of 73 female employees who gave birth in FY 2009 used this system, and the one remaining employee is scheduled to use it.

Men: Since its introduction in 1991, nine men have used this system.

Women: 144 women used this system in FY 2009. Men: Since FY 2003, two men have used this system.

f-Staff system

Through our f-Staff system, introduced in 2005, we have reemployed approximately 30 women who resigned their jobs with Kansai Electric Power to give birth or to raise their children. Based on their work performance, such f-Staff members may eventually be hired as full-time employees, if they so desire; four f-Staff members have been rehired as full-time employees so far. The system was further expanded in FY 2008 to include the reemployment of employees who resigned to provide nursing care to family members.

Leave systems

Kansai Electric Power offers leave systems to support employees who are raising the next generation. In addition to providing maternity leave and childcare leave as mandated by law, the Company offers its own support measures: spouse maternity leave and family support cumulative leave.

Spouse maternity leave offers five days' leave to employees whose spouses are giving birth, while family support cumulative leave permits employees to save time from their annual paid leave and divert it to spouse or family nursing care, or for visits to the hospital for infertility treatment.

Promotion of employment of older people

Efforts to employ the elderly at Kansai Electric Power predate the implementation of the Law for the Stabilization of Employment of Older Persons in 2006, which mandates such measures. Our reemployment system for employees retiring at the age of 60 was introduced in 1996. In 2001 we established the e-Staff system, which greatly expanded the types of work covered. In 2006, we revised our system to raise the mandatory retirement age to 65 in stages and expand further the range of positions in which older employees

are placed. Today, more than half of our retirees choose to return to work after the age of 60 under the e-Staff system. It enables older employees to continue to use their knowledge and experience in their familiar workplaces.



Constructive guidance in order to pass on skills to younger employees

Promotion of the employment of people with disabilities

Our efforts to employ disabled people are ongoing. For example, in 1993 we established Kanden L-Heart, a special affiliate company where we have actively employed disabled people for many years.

Thanks to these efforts, as of June 2010, our employment rate for disabled people was 2.24%, continuing to exceed the legally required rate (1.8%). We will continue to promote the employment of people with disabilities, with the goal of increasing their independence and participation in society.

Change in the rate of employment of disabled people



Initiatives to promote the employment of mentally disabled people

At Kanden L-Heart Co., Ltd., 112 disabled people are employed. In May 2009, the Ministry of Health, Labour and Welfare designated Kanden L-Heart as a "model business promoting the employment of mentally disabled people," who are in special need of more employment opportunities, and in light of this the Company took on nine mentally disabled people together with three counselors. The entire Kansai Electric Power Group is united in the effort to implement this employment model for mentally disabled people so that it can serve as a reference for as many other companies as possible, by means such as pioneering new job categories and providing support to help employees settle in the workplace.

Appropriate management of working hours

We are endeavoring to monitor employees' working hours accurately and to comply with applicable laws by, for example, ensuring that employees working long hours receive guidance from industrial physicians. We also require employees who work overtime to receive instructions from management beforehand and to selfreport their hours worked. In addition to having management check

these reports, we aim to instill an awareness in all employees of the need for appropriate management of working hours.



Morning and evening meetings are held in all business locations to help create a pleasant, open working environment

Maintenance of stable labor and management relations

Kansai Electric Power has concluded union shop agreements with the Kansai Electric Power Labor Union, and we have built over 50 years of history of working toward the shared goal of improving company productivity accompanied by improving labor conditions. We have built good labor and management relations based on a strong relationship of trust. In order to maintain this good relationship, we will hold operation confabulations about company management plans and other topics among other efforts to promote mutual understanding and agreement between labor and management.

Initiatives to support employee development

Aware that our employees are the driving force behind all the business activities of the Kansai Electric Power Group and that it is their development that underlies the Group's overall growth, we are actively developing a range of initiatives to offer sustained support for the growth of each employee. For example, Kansai Electric Power has reviewed its personnel and salary systems so as to offer more support than ever before for the sustained development of motivated employees. In terms of measures for education and training, we are making efforts to create even more opportunities for employees to teach and be taught, by means such as improving training programs designed for different specialties and competence levels, with a view

to enabling the development of each individual employee.

The Company is also proactively supporting workplace events, clubs, and other initiatives to create more lively workplaces overall.



A workplace event

4



Communicating with stakeholders

A multifaceted dialogue with customers

Promoting better understanding of nuclear power

Approximately half of the electricity Kansai Electric Power delivers to its customers comes from nuclear power plants in Fukui Prefecture. Nuclear power is an environmentally friendly form of energy that does not produce CO₂ emissions during power generation. Thus, nuclear power is not only indispensable for generating the electricity on which our lives depend, but is also a key element of measures to curb global warming. Kansai Electric Power is conducting extensive activities to deepen people's understanding of nuclear power.

Observation tours of nuclear power facilities

Kansai Electric Power invites customers to visit Fukui Prefecture and participate in the observation tours of nuclear power plants and related facilities. In FY 2009, some 35,000 people took part in these tours

Teaching the younger generation

Mobile classrooms

Our future is in the hands of the children who form the next generation. One of our most vital missions at Kansai Electric Power is to impart to the younger generation a sense of what energy is and why it is so important. Members of our staff visit local elementary and junior high schools to hold "mobile classrooms" teaching students about energy. These mobile classrooms explain the basics of how electricity is produced and transmitted over distances, as well as how it is used and what we can do to conserve energy and protect the environment.

The classes are devised to enable students to learn about energy in fun, simple ways, such as operating a hand-turned generator to light a light bulb, or using experimental equipment to explain the effect of CO₂ on global warming.



Observation tour at the Nuclear Energy Training Center * For details of observation tours, please contact your nearest sales office.



"Mobile classroom" illustrating the mechanisms of global warming

VOICE Working for harmony with local communities and PR at a frontline workplace

Striving to create trust through mobile classrooms

I work on activities designed to increase people's understanding of our business through initiatives such as guided tours of power plants, mobile classrooms, and local events. At mobile classrooms in particular. I ask teachers about what they want in advance so as to prepare better lessons, and in the classes themselves I try and prepare explanations and experiments from the children's own viewpoint. Seeing the students' eyes sparkling as they listen or carry out

experiments in classes not only feels worthwhile, but also gives me a real sense of my role in harmony with local communities and PR activities. I believe that such activities result in a deeper level of trust in the Company, and hope to be able to continue to use mobile classrooms to give children the opportunity to think about energy and the problem of global warming.

> Kenii Onishi General Manager's Office, Kyoto Sales Office



Interaction with local communities via PR facilities

Kansai Electric Power is setting up PR facilities for use by the general public at power plants and other locations, both to help local residents understand our business activities and initiatives in the electric power industry and to deepen communication with local communities.

In July 2008, we opened Elgaia Ohi within the Uminpia Ohi Marina multi-leisure facility in Ohi, Fukui Prefecture. It includes one of the world's largest virtual reality theaters, offering visitors the chance to have fun while learning about energy and our planet's future.

In March 2009, we renovated the El City PR facility within the Nanko Power Station in Osaka City's Suminoe Ward. It enables visitors to learn in an interesting way about a range of interesting scientific phenomena in areas such as power, magnets, light, and heat



Giant virtual reality theater (Elgaia Ohi)



El City in Nanko has been renovated with a scientific theme

Communication via the Internet

Kansai Electric Power is not only striving for the swift, accurate dissemination of information about the Company, but is also working to provide content that is easy to use and useful for customers.

For example, in June 2009 we launched a "thunderstorm information" service on our Web site for use in preventing lightning damage. We also redesigned our mobile site in March 2010 in light of the increasingly widespread use of mobile platforms. Via our Kanden e-Patio Internet members club (with around 35,000 members), we also send out an e-mail magazine and provide information on the club Web site in an effort to deepen our relationship with members.





Kansai Electric Power Web site (thunderstorm information)

Kansai Electric Power mobile site

Providing information through print publications

We are making use of media, including print publications, to broadly provide information to deepen understanding of the business activities of the Kansai Electric Power Group.

Our regular publications are Yaku, a report aimed at opinion leaders, which delves into timely social issues, and the public relations magazine Watt, which features reports on our business activities in addition to lifestyle information and regional topics.



Yaku (issued guarterly)



Watt (issued quarterly)

Reflecting community opinions in our business activities

As well as inviting members of the community to obtain a deeper understanding of the Company's business activities, Kansai Electric Power sends staff from business locations to visit customers' homes and holds discussion meetings aimed at local key figures and opinion leaders in order to solicit opinions and requests that the Company can reflect in its operations.

We thus invite a range of opinions and requests concerning our business activities, both at events to enable interaction with people from local communities and during everyday operations. We value every piece of feedback, and are developing a diverse array of public consultations in order to reflect them in our various business activities. At the "Dambo-no-Koe" event started in 1994, Kansai Electric Power employees share opinions received from members of local communities with the Company in order to improve our operations.



Kansai Electric Power actively hosts discussion meetings





Strict Enforcement of Compliance

Consciousness raising and autonomous efforts in individual workplaces

Compliance promotion system

With the aim of earning even greater trust and fostering an open corporate culture, Kansai Electric Power established the Kansai Electric Power Compliance Committee in November 2002. Compliance Consultation Desks were established both in-house (Office of General Administration [Legal Affairs]) and externally (Miyake & Partners legal office) in February the following year to give employees a contact point for discussing compliance-related doubts. Since July 2005, the Compliance Consultation Desks have been available to all companies belonging to the Kansai Electric Power Group, and in April 2006 they were also made available for use by trading partners as part of the development of a system capable of gathering a wide range of information on risk.

Notifications to and consultations with the Compliance Consultation Desks are all reported to the Kansai Electric Power Compliance Committee. In FY 2009, there were 35 cases across the entire group.

Kansai Electric Power Group Compliance Consultation Desks



Activities to establish solid compliance awareness

To support autonomous, effective workplace activities with a view to promoting an even more pervasive awareness of compliance, staff of the Legal Department at Kansai Electric Power are continuing to visit frontline workplaces such as sales offices, operation and maintenance offices, and power stations to engage in dialogue and training. In FY 2009, 35 visits were made to a total of six departments, including those related to nuclear and thermal power.

Questions are invited in advance of this dialogue and training to enable staff to deal with material firmly rooted in actual operations. Answers to a questionnaire completed after attending the sessions included numerous positive responses and requests for the program to continue, such as "I felt closer to the Legal Department having been able to talk face-to-face," and "Holding this regularly would be useful for my work.'

In FY 2010, Kansai Electric Power will continue to engage in dialogue and training rooted in actual operations while also implementing educational dialogue with management-level staff on contemporary issues such as harassment, enhancing the development of activities that balance imparting information with raising awareness.



Discussion and training activities

Initiatives to establish autonomous activities in each workplace

Since FY 2007, Kansai Electric Power has been engage in workplace discussion activities to enable employees to debate the compliance risks inherent in everyday operations in the workplace and foster a shared recognition of these risks.

This initiative was continued in FY 2009, and has become an established part of CSR educational activities. in the form of activities adapted to fit individual workplaces based on the April 2009 revised edition of the Compliance Manual.

These workplace discussion activities are continuing in FY 2010 with improved discussion tools aimed at deepening a shared workplace awareness of compliance risk, with the aim of further invigorating autonomous activities in the workplace.

Expanded support for Group companies

Visiting compliance training for Group companies, begun in FY 2007, was continued in FY 2009, with a total of 23 visits made to 14 different companies.

Attendees encompassed a wide variety of employees, from directors and management-level to staff levels at each company, with training mainly comprising raising awareness of compliance. Areas of interest to attendees were incorporated into the content of sessions and case study discussions were used to align training with the needs of individual companies.

This program is being continued in FY 2010 with the aim of expanding the number of different companies covered, and will also incorporate training themes dealing with an awareness of recent issues, such

as the occurrence of problems related to the diversification of employment patterns, in order to continue to enhance our support for Group companies.

Visiting compliance training



Improving different types of promotion tools and disseminating legal information

Enhanced information dissemination via electronic media

"Horei Mamoru-kun's Compliance Promotion Office," established in August 2006, has been redesigned, and the database of case studies concerning legal issues has been improved.

In addition to the Compliance Manual and a supplementary Casebook in question-and-answer format, Compliance Case Studies Collections and a range of

training materials have also been included, enabling employees to look up the required information easily.



Horei Mamoru-kun's Compliance Promotion Office

In addition, our in-house publication Homu Joho, which has provided information on legislation and compliance since its first appearance in 1988, has been transformed from the paper version, and is now published in a dual e-mail and database format. In its new incarnation as an e-mail magazine sent to all employees, it not only enables the provision of rapidly updated information but is also designed with a digest version in the body of the e-mail so that readers can easily sift through information. The Column on Current Affairs in Compliance, which explains compliance-related issues of

Advance of information security management

Kansai Electric Power has established the Infrastructure Development Committee chaired by the Vice President with the aim of building a strong management base capable of supporting mid-term and longterm growth. One important management issue it is addressing is



Organizational measures

- •Appointment of the General Manager of the Management Innovation and IT Headquarters as Chief Privacy Officer.
- •Formulation of Information Management Regulations, and production of the Information Security Rulebook explaining
- these regulations in straightforward terms for all employees. Self-checking by Information Security Managers regarding the daily handling of information, including the safe-locking of
- confidential documents and their appropriate disposal. •Establishment of Kansai Electric Power Group Information

Security Help Desk. 2 Personnel measures

- •Enforcement of rules by means of intensive training for new employees, managerial staff, and other groups.
- •Education program on information security for all employees
- at least once a year. Workplace discussions using case studies, etc.

3 Physical measures

•IC cards (employee identity cards, etc.) to control access to offices, zoning of offices by partitions, strict management of confidential documents by means such as additional allocation of shredders and locked furnishings.

general concern, is also being sent out as one part of this e-mail magazine, helping raise awareness among employees.

Homu Joho

Compliance with the Anti-Monopoly Law

Because the operating environment for Kansai Electric Power has changed significantly as a result of the liberalization of the electric power industry, we are required to carry out our operations with an even greater awareness of the Anti-Monopoly Law than before. Kansai Electric Power had already prepared a manual and explanations concerning the Anti-Monopoly Law and distributed these to all our business locations to make their content known. Taking the opportunity of the 2009 revisions to the Anti-Monopoly Law, as well as the review of the Guidelines on Appropriate Electric Power Trade set out by the Fair Trade Commission and the Ministry of Economy, Trade and Industry, in February 2010 we further revised our Anti-Monopoly Law Observance Manual (first published 1996, revised June 2006)

In addition to the preparation of this manual, in March 2010 we held an Anti-Monopoly Law training session in an effort to ensure an even firmer understanding of this issue on the part of employees.

We are continuing to provide detailed assistance in FY 2010, by means such as visiting branches to give training sessions on the Anti-Monopoly Law.

the promotion of information security management.

To advance effective, efficient security control measures, the committee deliberates on the formulation of annual plans and on midterm progress made, from the following four perspectives.

- 3 Physical measures such as document management and access control for offices
- 4 Technical measures such as improving computer systems



- 4 Technical measures
- •IC cards (employee identification cards, etc.) for authorization of computer users.
- •Checking by immediate managers to prevent fraudulent use of customer information systems
- •Data-file security system that automatically encrypts data files taken out of the company.
- •Use of system logs to prevent fraudulent manipulation by IT staff
- •Introduction of measures to restrict the connection of external storage media to in-house computers.

Enhancement of information security by IC cards (employee identification cards. etc.)





Individual authorization for logging in to the in-house network Unlocking with keycards and monitoring of entrance and exit history



Rigorous management of important documents and external memory media



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Kansai Electric Power Group

CSR Report 2010

This report is also available on the Internet (http://www.kepco.co.jp/english). Please direct your opinions and questions about this report to the CSR Promotion Group.

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