

## 2007 Chubu Electric Power CSR Report



# **Chubu Electric Power Co., Inc.**



### Editorial Policy

This report describes our efforts to help achieve a sustainable society, and the results of our initiatives.
In editing the FY2007 version of our CSR Report, we used as reference the Sustainability Reporting Guideline 2002 by Global Reporting Initiative (GRI), which provides international guidelines on organizational reporting on sustainability, as well as the Environmental Reporting Guideline 2003 issued by the Ministry of the Environment.

### Report period

Fiscal year 2006 (April 2006 through March 2007) (This report also includes information regarding some important events and activities that occurred outside the above period.)

### Date of Previous Report

September 2006

### Organizations Covered by this Report

As a rule, the performance of Chubu Electric Power Co., Inc. is reported on a nonconsolidated basis from FY2006. In some instances, the performance of companies in the Chubu Electric Power Group is reported.

### Contacting Us

l Toshin-cho, Higashi-ku, Nagoya, 461-8680 Japan CSR Group, Corporate Planning & Strategy Division Chubu Electric Power Co., Inc. TEL: +81-52-973-2124 FAX: +81-52-962-3015 E-mail: Csr.Webmaster@chuden.co.jp

### Legend

Details are found on our corporate website. http://www.chuden.co.jp/english/index.html

• In the main text, the terms denoted by "\*" are explained in the margin of the page near the location of the applicable term.

### $100K! \rightarrow P. 00$

Related articles and information can be found on the specified page or pages within this report.

URL http://www Related websites are listed.

### Photographs on the cover

Scenes from Nagoya Port Wildflower Garden Bluebonnet. The photographs at the beginning of the three main sections on the chapter title pages 10, 26 and 58 were also taken at Nagoya Port Wildflower Garden Bluebonnet. For details on Bluebonnet, refer to the relevant section in this report.

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Schematic Diagram of Chubu Electric Power System

## **Chubu Electric Power Group**

We are a total energy supplier, with energy as our core business, supplying electricity, gas, LNG, and distributed energy. We also offer environmental, social, and IT services in order to make our core business more competitive and profitable, and improve our brand value.

We will draw on the technical capabilities and expertise of Group companies to contribute to the building of a sustainable society.

Corporate Name	Chubu Electric Power Co., Inc.				
Home city	1 Toshin-cho, Higashi-ku, Nagoya 461-8680, Japan Phone +81-52-951-8211 (Head)				
President & Director	Toshio Mita				
Established	May 1, 1951				
Summary of Facilities (as of March 31, 2007)					

Summary	011	acinties	(as of	March	51, 2007

Power Generation Facilities	Thermal Hydroelectric	22.369 GW (11 locations) 5.22 GW (182 locations)
	Nuclear	4.884 GW (1 location)
	Total	32.473 GW (194 locations)
Power Transmission Facilities	Transmission Line Route Length	9 12,218 km
Transforming Facilities	Number of Substations Capacity	935 locations 120.613 million kVA 300 MW*
	Linkage Station	1 location
	Capacity	300 MW
Power Distribution Facilities	Distribution Line Length	134,971 km

\* For frequency conversion facilities (capacity: 100 MW), please refer to other pages

### **Primary Business Areas**

Electric utility and related enterprises Gas supply and thermal storage brokerage Distributed generation systems Overseas consulting and investment Real estate management service IT business Etc.

Principal Business Indicators (for FY2006 and FY2006 term-end)							
Capital		430.7 billion yen					
Total Assets		5,287.2 billion yen					
Interest-Bearing Debt		2,925 billion yen					
Number of Outstanding S	hares	782,153,165					
Number of Shareholders		331,701					
Number of Employees		16,025					
Service Area 5	prefectures in	n the Chubu region:					
Aichi, Gifu (excluding certain areas),							
Mie (excluding certain areas), Nagano, and							
Shizuoka (all a	reas west of	the Fujigawa River)					
Number of Customers	Light	9,081 thousand					
(excluding certain	Power	1,307 thousand					
high voltage customers)	Total	10,388 thousand					
Electric Power Sold		132.7 TWh					
Total operating revenues	(Parent Only)	2,117 billion yen					
	(Consolidated)	2,213.7 billion yen					
Ordinary Income	(Parent Only)	162.7 billion yen					
	(Consolidated)	178.6 billion yen					
Shareholders' Equity Ratio 29.9%							



Breakdown of Generated Output by Source





### Initiatives to strengthen Group management

October 2006	A merger of Eiraku Development Co., Ltd., Chuden Bldg. Co., Inc. and Chubu Greenery Co., Ltd. took effect to create a new company called Chuden Real Estate Co., Inc. Upon completion of the merger, Eiraku Development spun off its operations related to management of power distribution sites, which were taken over by NITTAI Co., Ltd. The takeover effectively created a new company named Chuden Haiden Support Co., Ltd.
February to March 2007	Chubu Electric Power successfully implemented a takeover bid on TOENEC CORPORATION to enhance its capital relationship with TOENEC.
October 2007 (scheduled)	TOENEC CORPORATION and C-TECH CORPORATION will mutually transfer business operations under a joint business reorganization strategy.

# Fulfilling our responsibilities and meeting society's expectations

At Chubu Electric Power, we will continue to fulfill our corporate social responsibility (CSR) by working in good faith to meet the expectations of all our stakeholders, publicly disclosing our initiatives and continually improving them with the help of feedback from the general public. Although our approach to CSR was incorporated into our Basic Management Policies in January 1996, we formulated our CSR Declaration in March 2006 to communicate our message more clearly and concisely to our stakeholders.

# **General Management Policy**

- 1. Bear in mind the origins of our business and create a future of joint opportunities with our customers .......... Create the future with our customers
- 2. Contribute to the global community as a good corporate citizen
  - ······· Form part of the global community

# **CSR Declaration**

Fulfilling our responsibilities and meeting society's expectations

chaba Elocato i ottori, ao a gonoral onorgy control company, lo committe a tor	Chubu Electric Power, as a	general energy	service company,	is committed to:
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Contributing to the development of a sustainable society by giving top priority to safety and striving to both provide a stable supply of energy and protect the global environment;

Managing our businesses in a fair and sincere manner by observing laws, regulations, and social rules, and by respecting corporate ethics; and

Giving priority to dialogue with all our stakeholders and maintaining high levels of transparency and openness in our business activities.

Customers	We are committed to providing our customers with safe, reliable, convenient, and inexpensive energy services.
Shareholders and Investors	We are striving to maintain and increase profits for our shareholders and investors through efficient management and effective investment.
Local Communities	We are determined to contribute to sustainable local development in partnership with local communities.
Business Partners	We promise to deal fairly with our suppliers as equal business partners.
Employees	We respect individuals and are endeavoring to create a cheerful and motivating workplace.

## **Message from the President & Director**



Taking our commitment to greater heights by remaining aware of the weight of our responsibility The Chubu region has been dubbed the "most vibrant region in Japan" in recent years. This designation is warranted when one considers the high effective ratio of job openings to applicants in the region, and great effervescence of Nagoya, the center of the Chubu region. To help Chubu continue developing into an even more attractive region in the future, Chubu Electric Power and its Group companies are committed to delivering a wide range of energy-related services while stressing reliability and affordability, thereby fulfilling our mission as a public utility company that excels at serving its consumers.

In 2006, in order to accelerate our CSR activities, we issued the first Chubu Electric Power CSR Report under our CSR Declaration, which spells out Chubu Electric Power's dedication and commitment to the region. We are confident that in line with the Declaration, we have made steady steps forward in various areas. This cumulative progress, including the appointment of external directors to drive reform of our management mechanism, implementation of more CSR-oriented procurement activity, and a project to promote the role of women in the workforce, has built a solid foundation for our future prosperity.

### Creating an open workplace

On the other hand, sadly we must report that, as a result of investigations following a series of scandals at other electric power companies involving falsification of data and inappropriate procedures relating to power generation facilities, we also found records of events at our facilities that are considered unacceptable. We take the occurrence of these unacceptable acts seriously. Under the leadership of the top management, we must continuously improve our measures to prevent the recurrence of these events, with a strong determination never to repeat the same mistakes. One important aspect of this endeavor is to create a culture that encourages employees to report defects and problems instead of concealing them. The above-mentioned events do not just concern the engineering department. Rather, they represent issues we as a company must tackle. We will drive home once again the important message that the power business is founded upon the trust of our customers, and we will expend all possible efforts toward building an open workplace where we can learn from past defects and problems, utilizing them as a valuable experience.

### Resumption of operation of Hamaoka Unit 5

With regard to the shutdown of Hamaoka Nuclear Power Station Unit 5 due to a lowpressure turbine blade failure in June 2006, we apologize for all the concern that we caused our stakeholders. We installed a pressure plate in March 2007, after which the unit resumed operation. However, it will take some time before the full utilization level is restored, as we must thoroughly review the design of the facility. We will continue to work on ensuring the safety of station operations by disclosing information on facility failures and problems in a timely manner.

## Launching full-scale environmental preservation efforts

At Chubu Electric Power, we believe that one of our most important management challenges is to address issues affecting the global environment. The shutdown of Hamaoka Nuclear Power Station Unit 5 also had significant impact on our environmental activities. Since units 1 and 2 are also currently stopped for a long-term overhaul to ensure operational and environmental safety, we need to do more to achieve our carbon dioxide emission reduction target without relying solely on nuclear power generation. We will resort to all possible measures to achieve the target, such as improving power generation efficiency further through development of LNG power stations utilizing a high-efficiency combined cycle system, developing our own wind power generation facilities, and acquiring credits by utilizing the mechanisms established under the Kyoto mechanisms.

Among the programs we implemented in FY2006 to promote our environmental communication, was the "Chuden Eco Partnership" initiative, where we collaborated with NPOs and other civic organizations to plant trees and provide education on the environment. We are confident that accumulation of these projects carried out in collaboration with the community will eventually expand our partnership in environmental preservation efforts.

### Respect for diversity – A driving force behind sustainable growth

As I mentioned above, we are implementing a project to further the role of women in the workforce. The purpose of this project is to drive an awareness reform regarding workforce diversity and create a culture where not only are women accorded their rightful place alongside their male colleagues, but where all employees respect the individuality and uniqueness of others and are encouraged to demonstrate their abilities fully. I personally believe that it is my job as the president of the Company to provide an environment and implement measures to make this happen. Such a diverse workplace will surely harness a driving force to propel us forward toward achieving sustainable growth. It is also hoped that we will be able to coordinate our activities with similar efforts of other local companies to make this a region-wide movement.

We invite your comments on our CSR Report 2007. We will analyze and learn from your inputs and improve the report further. We look forward to receiving your candid and open comments.

/ Toshio Mita President & Director



Highlight from 2006

## Addressing environmental issues in partnership with the community

## "Chuden Eco Partnership" activities

Chubu Electric Power started the "Chuden Eco Partnership" initiative together with civic organizations such as NPOs, schools, and other organizations concerned about the environment. In FY2006, over 10,000 people participated in various activities. We will provide support to expand the circle of environmental activities in the Chubu region, to generate a larger environmental preservation movement.

Infusing fresh energy into environmental activities through collaboration With the organization of the environment-themed

Expo 2005 Aichi Japan (Japan Expo 2005), the Chubu region, led by civic organizations, became active in the area of environmental preservation.

In line with this trend, Chubu Electric Power decided to integrate in FY2006 the various environmental activities it was implementing in different areas, such as tree planting and nature observation programs, under the single banner of "Chuden Eco Partnership."

An individual's impact may be limited, but if many individuals join forces to send a message and take

action, the impact will be magnified and more people will be encouraged to join the cause. By working with civic organizations, we can also better understand and address the environmental needs of the community.

By strengthening the traditional framework of independent action by individual environmental organizations and corporations through civiccorporate collaboration, we hope to maintain the heightened level of awareness of the environment that followed the holding of Expo 2005 Aichi Japan.

### Reconfirming the partnership through a symposium Strengthening the Eco Partnership through concerted efforts!

Following a kickoff event in May 2006, we organized a number of specific, original programs between June and October in collaboration with various citizens' group in the Chubu region. On November 5, we held the "Chuden Eco Partnership" symposium where participants, including volunteers from civic organizations working in partnership with Chubu Electric Power, discussed activity results.

At the symposium, various groups presented the outcomes of their activities and shared with the audience their reflection on what they learned, the



next targets, and how the partnership should steer collaborative efforts further among civic organizations and between organizations and companies. Heated discussions took place on various topics, including the issues of manpower and money, which are two important resources required to carry out environmental activities. Interesting comments were received. These included: "A problem that cannot be addressed by one civic organization alone will be eventually solved if we continue to create new partners and seek a solution patiently" and: "We cannot hastily set our limit on what we can do, because possibilities are endless if we work together." Chubu Electric Power will learn from the important feedback received at the symposium and strengthen our "Eco Partnership" by working hand in hand with citizens' groups.



Each group presented the outcome of their effort at the symposium



2007 Chubu Electric Power CSR Repor

### Eco No Tsubomi, Aichi Shukutoku University

### Representative: Mikako Kobayashi



We gained knowledge about the environment and heightened our environmental awareness. We were also able to learn how much energy and effort are put into planning and organizing an event. It was a great experience.



Eco No Tsubomi organizes the Eco Quiz Rally and maintains the Eco Bulletin Board on campus to raise awareness among students about ecological and environmental issues.

### Ecobankaichi (NPO)

Representative: Yasuhiro Hiramatsu



With help from the corporate sector, we were able to harness fresh energy. We will certainly utilize this energy in other events.

Test drive of fuel cell vehicle

Ecobankaichi provides children with information and opportunities to learn about the environment, with activities such as organizing a test drive of a fuel cell vehicle and hosting a aboratory workshop on alternative energy.

## Chubu Recycle Citizens' Organization (NPO)

### Representative: Yoshiyuki Ogihara



I hope that people will learn more about the collaboration between companies and NPOs through the "Eco Partnership."



Chubu Recycle Citizens' Organization conducts Chibo heckie chizzhis organization conducts wide-ranging programs geared toward creating a recycling-oriented society and an adequate regional recycling system. They are also Chubu Electric Power's partner in a program to present consumers with gift certificates to receive seedlings.



### Representative: Shoii Tsuiii



Looking at the faces of children brimming with energy, I realized once again the significance of companies and NPOs working together.

We received comments from

organizations and companies

outside schools. They provided

us with fresh insights and views.

participants working for

Representative: Takuva Takushoku

Family cooking class

The Asperger Society supports parents who are raising children with developmental disorders. They organize family cooking classes and recreational events



Environmental Learning Exchange Program. participated in by high school and university students The Program organizes events that promote friendship between high school and university students in Nagano Prefecture and gives them hands-on experience on environmental issues through joint activities.



Representative: Kiyomi Shimamura

What we expect

"Chuden Eco

Partnership"

from the

We had concerns at the beginning, but soon found that Chubu Electric Power was a dependable cheerleading squad. They supported us every step of the way.



Power generation experiment Nisshin Citizens' Network on the Environment attaches importance to providing children with learning opportunities. Under this principle, the Network organized to Operative Without Statement of the Statement the Candle Night, a power generation experiment, and other events where citizens can take the lead and also collaborate with the local government and companies to build an environmentally friendly town.

Expanding the "Chuden

## Representative: Minoru Ohata



## Lovers of Water and Greenery (NPO)

Ecology Education Study Group (ECOEDU) (NPO)

### Representative: Shojiro Sato



We had many volunteers from various sectors of society. It was good to see people of different backgrounds work together and learn about the

## Association for Promotion of Nutritional

Representative: Ikuyo Oda



### Team Bandori (NPO)

Representative: Ritsuko Sakai



We were happy to see some familiar faces, as some participants had worked with us at Expo 2005 Aichi Japan. We will organize more joint events like this to deepen friendship with other organizations.

### Grove Metaseguoia (NPO)

Member: Yoshihiro Otsuka



## Many parents participated in

the event and watched their children take on interesting challenges. The children also made many new discoveries

in a natural setting.

Children experienced tree planting first-hand.

The Group conducts programs designed to promote and implement environmental education and research. These programs mainly target children and their parents, as well as teachers, in the community



Forest building workshop

**Special Report** 

Highlight

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Collaboration

The Association is organizing events that educate participants through observation of nature and forest building workshops to create more lovers of water and greenery who



Family Eco cooking class

The Association focuses on environmental ssues relating to food and carries out programs to help people understand what they can do for the environment in the kitchen, such as reducing refuse and wastewater from home.



Field day to observe nature near a power station

By inheriting the spirit of Expo 2005 Aichi Japan, the Team organizes various programs, such as field days to observe nature near power stations, where citizens can learn to think and act for the global environment



Water workshop

E-Produce promotes events that introduce children and their parents to exciting discoveries about global resources and natural environments, such as hands-on workshops on nature and energy

2007

Chubu Electric Power

r CSR Report

Eco Partnership" -Voices of participating We want to share our

environment. commitment to the global

Improvement - Shizuoka Branch



2006)

"Chuden Eco Partnership" experience.

environment. We asked some of the groups that worked with us to comment on their

(In random order, November

Eco Partnership," Under various Partnership

groups

with citizens' groups to carry out many different activities. all designed to protect our

programs, we are working

environment with many

more people. This desire led

to the start of the "Chuden



## ちゅうでん コムコ 🕖 Chuden Eco Partnership

E-Produce (NPO)

Representative: Takehiko Hasegawa

We had many families taking part in the event, which was

people who met for the first

time worked together for the

same cause and developed

what we wanted. Many

friendships. It was a

wonderful gathering.



# Proposing "E Air-Conditioning" to Help Build Eco Stores

## Working as a Solution Provider

### We are working together with our customers to tackle global warming

Prevention of global warming is an important management issue Chubu Electric Power is tackling. Accordingly, we consider it our mission as a corporate citizen to actively reduce carbon dioxide emissions. At the same time, we are also collaborating with our customers toward conservation of the global environment

### Proposing optimal services meeting the needs of individual customers

We are drawing on the technical capabilities and wide range of experience of Chubu Electric Power and other group companies to propose energy solutions. Each customer is presented with an optimal energy service designed to meet their specific needs, be it environmental compliance or cost reduction



### Customer's comment Shiro Okamura Manager of AEON Chikusa Shopping Mall, AEON Co., Ltd.

Our store is the first Eco Store in the AEON network. It is an urban shopping center that organically integrates various green technologies and environmental preservation efforts. Under this concept, we designed an energyefficient air-conditioning system incorporating new perspectives hammered out through intense discussion, since this accounts for a significant portion of all energy consumed by the mall. Based on Chubu Electric Power's proposal, we adopted turbo refrigerating units. They are very efficient and we are able to enjoy significant energy savings while cutting down on carbon dioxide emissions substantially. The energy-efficient air-conditioning system is also helping us keep the running costs low. As an Eco Store, we will continue to provide information on the environment with the goal of becoming trusted and popular among the local community

Benefits of "E Air-Conditioning System' Reduction in carbon dioxide emissions Reduction in energy consumption Reduction in running costs Compared to a conventional (gas-based) system the "E Air-Conditioning System" resulted in: Lower CO<sub>2</sub> emissions by 589 t-CO<sub>2</sub> a year Energy savings of 11,172 GJ a year

### Eco Store combining various environmental technologies and ideas

AEON Chikusa Shopping Center opened in 2005 on a large former-factory site. It is drawing attention as an Eco Store situated at the heart of an urban area. This Eco Store, the first of its kind introduced by the AEON Group, boasts various environmental facilities such as wind power and photovoltaic generators, a rainwater recycling system to reduce feed water consumption, and greenery around the exterior walls of the mall. This "green" shopping center also incorporates various ideas and attempts to protect the environment. In a sense, it is a giant theater that provides the audience with real environmental experience.

### Proposing electrical air-conditioning system that is environmentally friendly and provides energy-saving benefits

In line with its environmental concept, the shopping mall spent a lot of effort designing its air-conditioning system to maintain comfort in the large commercial complex. However, they faced a challenge in reducing environmental load while keeping energy costs low. Chubu Electric Power addressed these needs and proposed an "E Air-Conditioning System" (air-conditioning system that runs on electricity), which consists of an inverter turbo refrigerating unit and other components that together provide efficient cooling while saving energy and reducing carbon dioxide emissions through

System overview Constant-speed turbo refrigerating unit 1.230 kW x 1 unit Inverter turbo refrigerating unit 1,230 kW x 1 unit Electrical heat pump 1.834 kW

> utilization of groundwater. The Eco Store adopted this airconditioning system. This "E Air-Conditioning System" can provide a high heat output equivalent to around 18 times the energy input. AEON also introduced the same high-efficient "E Air-Conditioning System" to its Nagoya Dome Shopping Center outlet that opened in the spring of 2006 (located in Higashi-ku, Nagoya City, this shopping center extends 220 meters in total length and houses as many as 180 shops). We will continue to propose solutions to all the energy utilization challenges our customers face. We are committed to working with our customers to prevent global warming.

### in charge



Solution Group

Service Division

Department Custome

Under the "E Air-Conditioning" project with AEON that eventually led to system introduction, we were able to see the fruits of our effort in putting this system together, such as examining various technologies and ideas to provide an energy solution meeting the customer1s needs. We feel AEON has

acknowledged us as their Customer Service & Sales business partner. We will continue to work toward developing optimal solutions for our customers.

**Special Report** 

Highlight

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Energy

Solution

Management and Economic Performance

### **Management Goals**



Social Performance

At Chubu Electric Power, we publish Management Goals, an annual management plan that details the current business environment and direction of management, as well as setting forth the challenges facing the Company and the specific measures that will be used to tackle them. The 2007 edition of Management Goals focuses on our objective as a business entity, which is to be a "total energy supplier." To make sure we become the ideal group we envision, we have established a new set of management targets to be achieved by FY2010. For details, refer to the latest edition of Management Goals published on March 27, 2007.

### The Mission of the Chubu Electric Power Group

As a total energy supplier, we are committed to delivering new value through energy products to our customers and achieving sustained growth for our entire Group.

### Four Pillars of Management

To achieve the Company's mission, as defined above, we will undertake actions under the following four pillars.

### 1 Business Activities Aimed at Satisfying Customers

To achieve greater customer satisfaction, we will work to improve our services further and actively propose solutions to meet the diverse needs of customers. We will integrate our business operations in the fields of electricity, gas, LNG and distributed energy to provide customers with new added value from energy products.

### 2 Continuous, Reliable Provision of Affordable Energy

By considering such issues as energy security and protection of the global environment, we will work to build and operate efficient facilities in a systematic manner with a medium- to long-term perspective, such as building power generation facilities to achieve an optimal balance of power sources, in order to produce a reliable supply of affordable energy.

### 3 Higher Corporate Value through Enhancement of Group Power

We will strengthen affiliates through reorganization and reinforcement of business management and strategically utilize their management resources to enhance the comprehensive position of the Group. To this end, we will achieve the management targets for FY2010 without fail and provide greater enterprise value as an integrated group of competitive energy service companies, so as to meet and exceed the expectations of shareholders and investors.

### 4 Positive Actions to Fulfill Our Corporate Social Responsibility (CSR)

To ensure management based on complete compliance, we will actively strive to fulfill our corporate social responsibility (CSR) as a good corporate citizen. For example, we will work harder on issues affecting the global environment and reinforce the trust in which we are held by the community, with the aim of building a harmonious relationship with the community in which we operate.

### Management targets (for FY2010)

### **Electricity sales target**

In the residential services business, we will convert a cumulative total of over 600,000 homes to all-electric appliance operation by the end of fiscal year 2010. In the business and industrial segment, we will create 800 MW of demand by promoting the electrification of kitchens, airconditioning systems, and so on, within the same time frame.

Targets for the gas, LNG, and distributed generation businesses

Total sales of 45 billion yen in the gas, LNG, and distributed generation businesses by fiscal year 2010

### Financial targets (Consolidated)

Achievement of the following targets through Group synergy

Item	Consolidated targets	Target year
Ordinary income	over 160 billion yen	
Return on assets (ROA)	over 4.1%	Average of four years from FY2007 to FY2010
Operating cash flow	over 470 billion yen	
Balance of interest- bearing liabilities	less than 2.6 trillion yen	At the end of FY2010

Note: ROA = business profit (ordinary income + interest paid) / term-beginning and -end average total assets

Management

Economy

Management and

Economic Performance

and

### Social Performance

(Unit: tens of MW)

### Basic policy on utilizing cash flows from business operations

At Chubu Electric Power, we believe in utilizing the cash flow generated from operating activities in a manner best serving the needs of stakeholders on the whole. We specify below the four areas where we will utilize our operating cash flow according to the guidelines illustrated in the chart. We will continue to seek ideal ways to utilize cash flow by responding to the changing business environment.

### Invest in improvements to maintain our power business and efficiently provide a reliable supply of electricity

We will utilize cash flow to fulfill our responsibility as a public utility company, thereby benefiting all stakeholders, including our customers.

### Provide stable dividends for shareholders

We will utilize cash flow to repay the support of our shareholders and investors.

### Invest strategically toward business growth and development

We will utilize cash flow to meet the expectations not only of our shareholders and investors, but also of our customers and the communities in which we operate.

(Specific examples: Investing in gas, LNG sales, distributed generation, overseas energy businesses, and other areas that will help us achieve sustainable growth.)

### Improve our financial strength

We will utilize cash flow to provide greater assurance to our creditors, banks and other business partners. This effectively means reducing costs, which, in turn, is in the interest of all our stakeholders.

Guidelines for distribution of operating cash flow (consolidated) for FY2007 through FY2010 (figures are estimates)



### Our concept of distributing retained earnings to shareholders

As mentioned above, we set forth our new management and financial targets for fiscal year 2010 in Management Goals. In line with the new targets, we aim to maintain a payout ratio of 40% based on net income in each fiscal period, in consideration of the past levels of dividend per share and payout ratio. Even if our earnings deteriorate, we will work to maintain a dividend level of 60 yen per annum, unless a significant deterioration in earnings has been brought about by an unexpected change in the business environment or similar cause.

### **Electric Power Supply Plan for FY2007**

To map our specific efforts to ensure reliable energy supply into the future as spelled out under our Four Pillars of Management, we have developed an electric power supply plan for fiscal year 2007 with a focus on three key areas; namely, ensuring a reliable supply, driving further efficiency improvement to outperform the competition, and implementing active measures to help preserve the global environment.

### Sales plans

	FY2005 (actual)	FY2006 (actual)	FY2007	FY2008	FY2009	FY2010	FY2011	FY2016	FY05-FY16 annual increase rate
Power sales (hundreds of GWh)	1,306 (1,286)	1,327 (1,327)	1,350	1,358	1,369	1,379	1,390	1,442	0.9 (1.0)
Maximum power (transmission end, tens of MW)	<pre>(2,634) * 2,556 (2,557) *</pre>	<pre>(2,685) 2,606 (2,625)</pre>	<pre>(2,748) 2,665</pre>	2,680	2,698	2,716	2,733	2,818	0.9 (0.9)

\* Figures in brackets are for levels at the generation end.
 \* Figures in parentheses are for levels after compensation for temperature

### Major power facility stations

		FY2007	FY2008-2011	FY2012-2016	FY2017 onward
	Nuclear power				
Compar	Thermal power		Shin-Nagoya No.8 system: 145.8 (4-10/2008)	Joetsu No.1 system: 119 (7/2012 - 1/2013) Joetsu No. 2 system: 59.5/119 (7/2013)	Joetsu No.2 system: 59.5/119 (FY2017)
ny facilities	Hydropower		1 location: 0.023 (FY2008) 1 location: 0.021 (FY2011)	1 location: 0.036 (FY2012)	
	New Energy (wind power)		2 locations: 3.4 (2/2009) 3 locations: 4.6 (FY2009)		
Power fr comp	Nuclear power		Oma: 20.5/138.3 (3/2012)	Tsuruga No.3: 61.52/153.8 (3/2016) Tsuruga No.4: 61.52/153.8 (3/2017)	
om other anies	Hydropower (FY2009 onwa		Kawakami: 0.12 (FY2009 onward)	Tokuyama*: 15.3 (FY2014)	
-	Total	0	174.464	316.876	59.5
	iotai		Total of FY2007 through FY2016	6 491.34	00.0

\* Chubu Electric Power will generate power at its own facility at Tokuyama after the completion of the Tokuyama Dam (scheduled for the end of FY2007).

### Maximum power supply and demand plan (transmission end)

	FY2006 (actual)	FY2007	FY2008	FY2009	FY2010	FY2011	FY2016
Maximum power (tens of MW)	2,606 (2,625) *	2,665	2,680	2,698	2,716	2,733	2,818
Supply capability (tens of MW)	2,773	2,946	3,023	2,982	2,945	2,983	3,081
Supply reserve capability (tens of MW)	167	281	343	284	229	250	263
Supply reserve rate (%)	6.4	10.6	12.8	10.5	8.4	9.1	9.3

\* Figures in parentheses are for levels after compensation for temperature

### **Internal Controls**

### Social Perf

### **Revision of Management Structure**

### Appointment of outside directors and restructuring of the executive officer system

Putting fairness and transparency at the center of management, Chubu Electric Power has been reforming its management structure since FY2005 through a reduction of the number of directors, introduction of the executive officer system, and so on.

In fiscal year 2007, we revised our management structure to reinforce the supervisory function while also building a more efficient system for business execution.

Specifically, we appointed outside directors to further drive our commitment to the separation of decision-making and supervision on the one hand, from day-to-day operations on the other,

and thereby enhance the fairness and transparency of our management. We also revised the various titles for directors and streamlined the classifications to have only representative directors and directors. Furthermore, we set levels for executive officers and designated the offices of President & Director, Executive Vice Presidents, Senior Managing Executive Officers, Managing Executive Officers, and Executive Officers, and have the executive officers complete the discharge of all duties relating to business operations.

As a rule, in a situation where an executive officer serves in another position of particularly heavy responsibility such as General Manager, a director is to serve in such dual positions, to prevent discrepancy between management decisions and actual business operations. In fiscal year 2005, we established the Chubu Electric Advisory Board as an advisory body to the President & Director. We are planning to review the roles of the Advisory Board in line with the revision of our management structure. Chubu Electric Power will continue to enhance its corporate governance<sup>\*</sup>1 in order to ensure the exercise of sound management and enjoy an even greater degree of trust among its stakeholders.



Internal control<sup>\*1</sup> is a mechanism indispensable to any company in the implementation of management strategies and pursuit of business purposes. In a way, internal control is a prerequisite of proper risk management.

With the enactment of the Corporation Law in May 2006 and the passing of the Financial Instruments and Exchange Law<sup>\*2</sup> the following June, a basic legal structure has been put in place to ensure proper business operations of companies.

### **Establishment of Internal Controls**

### Establishment of systems ensuring proper business operations of the Company

To set forth our basic stance on the establishment of an internal control system, we passed a resolution at the Board of Directors meeting in April 2006, to establish a set of systems for ensuring proper business operations of the Company, consisting of systems relating to business management, risk management, compliance and auditing, among others. We are striving to keep these systems functioning effectively so as to earn the trust and support of our stakeholders.

## Establishment of risk management regulations

In March 2007, we published our Risk Management Regulations to step up our risk management system further. The regulations define risks, specify the procedures and responsibilities relating to risk management, spell out the risk management system, and also reconfirm the rules and other specific requirements regarding risk assessment and analysis to be applied to individual measures. Using the Risk Management Regulations as a guide, we will work to achieve continuous and stable growth of our business through more proper risk management.

### Group initiatives

As part of initiatives to ensure the proper conduct

of business operations, Chubu Electric Power has defined internal Group controls. We have set up a department to oversee relevant issues pertaining to Group companies in order to adequately develop management strategies and policies applicable to the whole Group, and to effectively manage the Group companies. Starting from fiscal year 2006, we have been conducting internal audits of consolidated subsidiaries, while extending support to Group companies in their efforts to establish and operate internal controls.

## Internal controls on financial reporting

Chubu Electric Power is driving an initiative to establish internal controls on financial reporting in compliance with the Financial Instruments and Exchange Law, by establishing a review committee for these controls chaired by the vice

president.

As preparation for the official implementation of the controls in April 2008, we ran a pilot project from October through December 2006. This project was aimed at establishing an infrastructure within which we can smoothly implement internal controls on financial reporting (the so-called "documentation phase"). We are expanding the project to all Company departments after incorporating revisions and improvements reflecting the results of the trial run. Internal control: Internal control is a process that is built within an organization and implemented as part of its business operation, in order to achieve one of four purposes: effective and efficient business operations, reliable financial reporting, compliance of business activities, and maintenance of assets.

\*2 Financial Instruments and Exchange Law: Enacted in June 2006, the Financial Instruments and Exchange Law (the so-called "J-SOX Law") incorporates a system for the evaluation and audit of internal controls relating to financial reporting, with the main purpose of ensuring reliability of financial reporting by companies. With the establishment of the law listed companies are now required to put in place internal controls relating to financial reporting.

As of the fiscal year commencing April 1, 2008, companies are required to create an Internal Control Report evaluating the results of their internal financial reporting controls and submit the report to the authorities along with the company's Securities Report. Internal control reports must have been audited by certified public accountants.

\*1 Corporate Governance: The

organization, and creation

checks in order to ensure

and operation of a system of

the appropriate and efficient

design of the decision-

making system and

management of the

corporation

### **Ensuring Safety and Security**

Management and Economic Performance Ensuring Safety and Security Environmental Performance Social Performance

At Chubu Electric Power, we consider it our responsibility to continuously provide customers with a reliable, safe and affordable supply of energy well into the future. To fulfill this responsibility, we must build and operate power facilities systematically. Chubu Electric Power is working to build, maintain and smoothly operate safe facilities with the public's understanding and cooperation.

We are also striving to provide value-adding services by exercising utmost care to ensure quality.

### **Ensuring and Reliable and Safe Supply of Power**

### **Reliable supply**

## Efforts to ensure an optimal mix of power sources

In order to ensure that our customers continue to enjoy reliable, uninterrupted access to excellent energy services well into the future, we must develop our power facilities further. It is also vital to secure an optimum power mix, thoroughly comparing and contrasting a wide range of options, including purchasing power through bilateral contracts and from the wholesale electric-power market, while considering such aspects as efficiency, energy security, and environmental preservation. To this end, we will develop power sources for approximately 5 gigawatts, including power purchased from other companies, over the next 10 years, from fiscal year 2007 through fiscal year 2016.

### Active commitment to nuclear power

Nuclear power is an excellent source of electricity as it can effectively address the needs for energy security and conservation of the global environment. We will continue to carry out inspections, repairs and other tasks as deemed necessary to promote the utilization of nuclear power while always giving top priority to safety. We will also direct all possible internal resources to ensuring smooth development of new nuclear power stations, so as to increase the percentage of our power generated from nuclear energy, thereby achieving an optimal composition of power sources.

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### Ensuring stable fuel procurement and improving fuel infrastructure

In the area of fuel procurement, an essential component of electricity supply, we are implementing a range of measures designed to ensure stability, increase operational economy and allow flexibility in the face of changing demand. Of particular concern to us is LNG. because electricity generated at LNG thermal power stations accounts for a substantial percentage of our total electricity productions. As such, we are working to ensure stable procurement of LNG, keep costs low, and improve flexibility, among other matters. We are also working steadily to improve our fuel-related infrastructure, such as reinforcing the piers at LNG receiving stations, adding storage tanks, and building gas pipelines crossing the Gulf of Ise.

### Building flawless power transmission and distribution equipment

In the area of power transmission and distribution, we will systematically build equipment to ensure stable supply, by introducing new technologies and advanced safety equipment to improve efficiency further. As our facilities - which were constructed in the 1960s during Japan's high economic growth period - continue to age, we will drive forward the refurbishment of power transmission and distribution equipment over the medium-to-long term, following a well thought-out plan to make sure our facilities continue to operate reliably. We will also implement the necessary engineering work by involving Group companies. The technical expertise of Group companies will be combined to install and refurbish equipment effectively.

P > Corporate Profile > Business Plans



Employees inspect a pressure iron pipe at a hydropower station.

### Delivering a reliable supply of electricity

Each of our power generation departments has put in place or introduced a quality system in conformance with legal requirements or under a voluntary initiative. All activities relating to quality assurance are documented in manuals that clearly specify the procedures for creation, correction, verification, approval, storage and other tasks relating to quality records, as well as how to safeguard evidence (evidential documents).

The implementation status of the quality system is regularly checked by internal audits to make sure the system undergoes continuous improvement.

Our Electrical and Telecommunications Engineering Department also introduced a

quality management system (E-QIC\*1) in 2005 with the aim of ensuring continuous improvement of general maintenance operations. They are carrying out improvement activities by employing the PDCA\*2 cycle. We will continue to deliver electricity to the satisfaction of our customers.



Engineers assemble a turbine at Hamaoka Nuclear Power Station.

### • Initiatives by Our Group Companies

### Chita LNG Receives METI Award for Dedication to Safety of High Pressure Gas

Chita LNG Co., Ltd. receives LNG (liquefied natural gas) shipped from overseas on tankers, stores LNG in tanks, converts it to gas, and transports the converted gas to power stations.

As a company tasked with the achievement of the Chubu Electric Power Group's commitment to stable supply of electricity, Chita LNG has been expending maximum efforts to improve its management efficiency, giving top priority to safe, stable operation. As a result of this ongoing dedication, Chita LNG has been able to avoid accidents and disasters since its establishment in 1983. This excellent record was recognized in FY2006, when the Chita LNG station received an award from the Ministry of the Economy, Trade and Industry at the annual conference of the High Pressure Gas Safety Institute of Japan, for its status as an excellent facility with a superior track record in the safe handling of high-pressure gas.



\*' E-QIC: An abbreviation for "Electrical and Telecommunications Engineering Dept.," "Quality," "Improvement" and "Continuity."

> \*2 PDCA: A quality control technique whereby the cycle consisting of Plan, Do, Check and Act is repeated to improve the control level.

**Ensuring Safety and Security** 

### Management and Economic Performance Ensuring Safety and Security Environmental Performance

### Social Performance

### Safe facility configuration and operation

To make sure our customers can use our power with complete peace of mind, we are working to achieve a highly disaster-resistant facility configuration for the entire energy supply process culminating in the daily delivery of electricity. We have also established a system to minimize the spreading of damage should a natural disaster strike, as well as a system for prompt resumption of supply in such an event. Our service area is at risk of the occurrence of major earthquakes anticipated to strike in the Tokai region, and the Pacific coasts of the Kii Peninsula and Shikoku. We are making efforts to reinforce our disaster prevention measures with a focus on earthquakes.

### Disaster-resistant power facility configuration

### Earthquake-proofing of power facilities

We are taking steps to make our power facilities earthquake-resistant by considering all the characteristics and aspects of each facility. Our particular focus is on the Hamaoka Nuclear Power Station, where the buildings housing nuclear reactors are built directly on rock bed, many thick walls are arranged at regular intervals, and the center of gravity of each facility is lowered. As a result of these design measures, the Hamaoka Station boasts a very stable structure that can withstand earthquakes of the severest levels that are anticipated to hit the region. There is also a failsafe system that will automatically stop the nuclear reactors should a significant tremor be detected.



## System to minimize the spread of damage

### Networking of power systems

Power systems in our service areas form a weblike network consisting of the transmission lines leading away from power stations and other transmission lines connecting them in loops. Even if disasters or other emergencies put some transmission lines out of service, power can be swiftly transmitted to customers by other connecting routes. Our power systems also interconnect with the adjoining power systems of other electric power companies. These interconnected networks mean that even when the power grid of one company sustains damage in the event of a disaster, other companies can supply electricity to prevent a power shortage.

### Multiplexing of power facilities

Generally, our transmission lines are composed of at least two cables, and substations are installed with two or more transformers. In this way, our facilities are multiplexed for immediate supply of power through reliable alternative facilities if the usual ones are out of service due to disasters.

### 24-hour monitoring system

Under a system of round-the-clock monitoring, our Central Load Dispatching Center and Load Dispatching Control Center adjust generated output to correspond with power use by customers, which is constantly changing. They also monitor and control the flow of electricity delivered to customers through transmission lines and substations. In the event of disasters, they make a smooth switchover of transmission systems to keep the scope and duration of outages to the minimum.

### Disaster management system for prompt resumption of supply

### **Disaster management system**

If a disaster strikes or is anticipated to strike shortly, an emergency will be declared immediately and an emergency taskforce will be set up at each business location. Once an emergency is declared, the pre-appointed taskforce members will immediately report to work, even in the middle of the night or on a holiday, and work with dedication on their assigned duties to achieve a swift resumption of supply.

If the "Tokai Earthquake Watch" or "Tokai Earthquake Warning" is issued, we will issue a company-wide earthquake warning and set up the Earthquake Disaster Management Headquarters. We will closely communicate with national, local and public organizations, as well as other private organizations, to collaborate in the case of a disaster.

### Measures for early recovery

Our group owns a helicopter that can be used to gather information, as well as to transport materials, equipment and personnel. We have also established various communication networks including those utilizing wireless communication, optical fiber cables and satellite communication, to make sure the emergency taskforces at different locations can communicate smoothly.

To aid in the supply of emergency power to hospitals, shelters and other vital facilities in the event of a disaster, we also maintain special vehicles, such as power generation vehicles and mobile transformers, at each business location.

## Conducting simulated disaster drills

So that each employee can act promptly and accurately should a disaster strike, we regularly conduct disaster drills and facility recovery drills to train our employees under simulated disaster scenarios.

### Putting our Customers' Minds at Ease

## Emergency information on the company website

We try to provide blackout information rapidly through the mass media and other means of communication. We post blackout information emergency notices on our web page when a large-scale typhoon or other disaster causes a wide-ranging blackout.

### Electricity Safety Handbook

We have created an Electricity Safety Handbook in order to help our customers use electricity safely. The handbook outlines what to do in the case of a power outage or disaster, ways to use electrical devices safely and efficiently in our day-to-day lives, and more. We are distributing the handbook to general customers at our offices and stations.



### **Problems at Power Stations and Corrective Action**

### Compliance

Management and Econom Performance Compliance

Social Performanc

### Thoroughgoing inspections by the "Assessment/Inspection Committee"

In January 2007, Chubu Electric Power established the Assessment/Inspection Committee which is chaired by the Executive Vice President (General Manager for Power Generation). It is tasked with the inspection of power generation facilities in order to assess and inspect the operations of our nuclear, thermal and hydropower stations to confirm that all necessary procedures are in place and that falsification of data and other problems (hereinafter referred to as "unacceptable acts") are absent in accordance with the instruction from the Ministry of Economy, Trade and Industry (Nuclear and Industrial Safety Agency). Under the leadership of the Committee, we are carrying out inspections under strict guidelines.

To identify all unacceptable acts, we surveyed approximately 13,000 employees, former employees and relevant personnel at affiliates, contractors and other business partners over different periods and on wide-ranging topics. We also inspected various measuring equipment, computers and other devices and verified their records against original data. Past engineering work was also examined to determine if the necessary reports and notifications were filed according to the applicable law.

The results of these inspections found that, although there is no evidence of compromised security, a total of 40 unacceptable acts occurred, and these events temporarily put the soundness of our facilities at risk. These results were reported to the Nuclear and Industrial Safety Agency on March 30, 2007 and announced to the public.

HP > Press Releases (March 30, 2007)

## Cause analysis of unacceptable acts

As a result of analyzing the causes and backgrounds of these acts, we have learned that the problems were caused not only by misinterpretation or insufficient understanding of the law, but also due to our workplace culture that prevented employees from reporting their mistakes honestly or speaking up in front of their superior or supervising function even when they felt something was wrong.

## Countermeasures prevent recurrence

All of the events that were identified had resulted partially from organizational factors (such as the business culture and customs of the organization), and we recognize that we have not done enough to build an open environment.

Based on the results of cause analysis, we examined a set of company-wide recurrence prevention measures (action plan) to address the issues by raising the awareness of individuals and improving the organizational culture and characteristics. A preliminary draft was presented to the Nuclear and Industrial Safety Agency and published on April 6, 2007, and a more specific action plan was presented to the Agency and published on May 21.

These measures are classified under the following three pillars:

 Create an entrenched awareness of compliance (Raising the awareness of individuals) Establish an environment for open communication (Improving the organizational culture) Put in place a system to prevent unacceptable acts from being performed (Improving the organizational characteristics)

We honestly acknowledge the fact that these unacceptable acts occurred, and there were reasons why they occurred. Learning from the mistakes, we will implement sweeping recurrence prevention measures and strive for continuous improvement.

> Press Releases (April 6, 2007 and May 21, 2007)

## Implementation and evaluation of recurrence prevention measures

Related departments will share information in the implementation of recurrence prevention measures, where the measures are implemented in certain departments first and then expanded to the remaining departments. The status of implementation and entrenchment of such preventive measures will be evaluated on a regular basis and the results will be utilized to make improvements. We will also conduct audits through the Internal Audit Office and take appropriate actions to correct any problems we may find.

### Ensuring Compliance\*1

Chubu Electric Power Declaration of Compliance

Without compliance, there cannot be trust. Without trust, there cannot be growth.

### Building a stronger compliance system by reflecting the inspection results on power stations

Chubu Electric Power recognizes that the establishment of compliance is essential for winning the trust of our customers and local communities. For this reason, we are expending efforts under the leadership of the Compliance Committee (established in December 2002) chaired by the President. The Compliance Committee is functioning effectively as a verification system to prevent the occurrence of unacceptable acts.

However, the unacceptable acts identified through the latest inspections of our power stations work against our aspiration to become a trusted company. We take these unexpected outcomes seriously and are committed to building a stronger compliance system. In order to entrench the importance of compliance in the minds of our employees, we will keep them up to date with messages from top management as well as through educational programs on compliance in each business department. We will also continue to drive a grassroots initiative to propose ideas and solutions that began in fiscal year 2006, and promote the use of whistleblower hotlines to make sure the voices of employees in the field are heard.

## Chubu Electric Power's compliance system

Under the Compliance Committee, we have built a corporate compliance system to expand autonomous activities at each department and place of business. We have also instituted the Chubu Electric Power Declaration of Compliance and Eight Action Guidelines to propel management based on strict compliance. We are also conducting a broad range of programs designed to enlighten and educate employees. Specifically, we distribute a booklet documenting semale situations where compliance action is

sample situations where compliance action is needed, provide training for compliance leaders as well as training programs specific to each class of employees and each place of business. Our goal is to raise the awareness of our employees and encourage them to practice a compliance culture.

## Ensuring compliance in the Chubu Electric Power Group

In April 2003, we established the Chubu Electric Power Group Compliance Council to promote compliance among Group companies. Under the leadership of the Council, all companies of the Chubu Electric Power Group are building a compliance system and enlightening their employees. We support the efforts of Group companies by sending instructors to organize seminars. In November 2006, the Group adopted a joint statement to confirm the commitment of each company to drive compliance efforts independently while also cooperating with other Group companies toward further enhancement of compliance in the Group as a whole.

### Establishment of hotlines

We established a whistleblower hotline in December 2002 as a point of contact on compliance issues for employees seeking consultation and reporting problems. In April 2004, a joint hotline was set up as a central contact point for all companies in the Chubu Electric Power Group. These hotlines ensure anonymity of callers while making sure proper actions will be taken in response to reported problems. With the enactment of the Whistleblower Protection Act (April 2006), we have expanded the scope of hotlines to cover temporary workers and business partners as well. Compliance Chief Manager (C/M) Head office division directors and regional office division directors Compliance Manager (CM) Regional office division directors, rontilne office managers, etc. Compliance Leader (CL) Compliance Leader (CL) Compliance Leader (CL) Employees Chubit Electric Power Group Compliance Council Compliance Council

Compliance Promotion System

\*1 Compliance: To comply with the law, internal rules and corporate ethics standards.

### Active Commitment to Nuclear Power — Our Stance

**Commitment to Nuclear Power Generation** 

Nuclear power is an excellent source of electricity as it can effectively address the needs for energy security and conservation of the global environment. The Nuclear Power Nation Plan established in August 2006 spells out the government's policy to promote the development and utilization of nuclear power as a key national measure

To Chubu Electric Power, providing energy security for local residents, as well as putting their minds at ease, are of the utmost importance. As such, we are voluntarily carrying out engineering works to improve the seismic

tolerance of Hamaoka Nuclear Power Station with the aim of making the facility more resistant to earthquakes. We will continue to carry out inspections, repairs and other tasks as deemed necessary to promote the utilization of nuclear power while always giving top priority to safety. To achieve an optimal electricity supply mix, we will strive to develop nuclear power independently so as to increase the percentage of our power derived from nuclear energy. Key events and activities that occurred at Hamaoka Nuclear Power Station in FY2006 are reported below.

### Actions Taken Following the Low-pressure Turbine Failure at Hamaoka Unit 5

### **Overview of problem**

On June 15, 2006, Hamaoka Nuclear Power Station Unit 5 experienced an automatic shutdown of a turbine, upon which the nuclear reactor stopped automatically. This problem did not cause radiation exposure outside the station. Subsequent investigations and inspections found breakages and cracks in many of the blades in the 12th stage of the low-pressure turbine\*1 comprising Unit 5 (Figures 1 and 2). No abnormality was found on blades in other stages.

Investigation results

Detailed investigations concluded that the blades in the 12th stage of the low-pressure turbine repeatedly endured strong impacts during the test conducted prior to the start operation. It is likely that these repeated impacts resulted in cracks. It is assumed that "random vibration\*2" and "flashback vibration\*3" occurred simultaneously and the forces generated by the respective

vibrations balanced out with each other. consequently causing cracks to generate due to "high-cycle fatigue\*4."

The knowledge available during the design stage did not allow us to anticipate that random vibration would affect blades up to the 12th stage, and therefore the effect of coupling with flashback vibration was not predicted. In other words, verification at the design stage was insufficient.

This event is caused by a design defect of a turbine of Unit 5. Based on the past operation records, we have confirmed that similar problems will not occur with turbines of Unit 1 to 4.

### Countermeasures

The blades in the 12th stage will be replaced with newly designed and fabricated blades. The turbine shaft will also be produced anew. However, the design and production of new blades and shaft will likely take some time, considering the periods needed for verification and testing, among others. For this reason, we decided to remove the blades

in the 12th stage and install a "pressure plate\*5" instead, as an interim measure until a new turbine is ready.

We submitted a work plan for the installation of the pressure plate to the government and received a confirmation that no safety problem was anticipated.

### **Resumption of** service operation

Thereafter, we received inspections by the government-appointed inspectors prior to the

### Figure 1 Damage Sustained by Low-pressure Turbine







Installation of the pressure plate

### Figure 2 Mechanism of Power Generation by Hamaoka Nuclear Power Station Unit 5

Cracks and breakages were found



occurring again.

commencement of assembly and operation of the low-pressure turbine, and the low-pressure turbine resumed its service operation on March 13.2007. Going forward, we will work with the

manufacturer and other related parties toward a speedy resumption of full-scale operation. By taking this problem as a valuable lesson, we will improve our design control system and take other actions to prevent the same problem from

\*5 Pressure plate: A plate (disk) that does not turn. It has the effect of lowering the pressure to the level achieved when the blades were present, and thereby rectifying the flow of steam.

1 Low-pressure turbine: A turbine located after a highpressure turbine that turns blades with the force of high temperature, high-pressure steam. A low-pressure turbine is designed to rotate efficiently even at a weakened level of steam force after steam has been used in the preceding turbine. (Fig. 2)

- \*2 Random vibration: Irregular vibration caused by disturbance of the flow of steam inside the turbine in a low-output condition, etc.
- \*3 Elashback vibration: Vibration that occurs when steam flows back into the turbine at high speed in the event that the turbine stops suddenly during testing, etc.
- \*4 High-cycle fatigue: A phenomenon where metal . material cracks after repeatedly receiving a certain level of force, and the generated cracks progress and eventually cause equipment failure.

Stage where one blade came off (12th stage)



### Seismic safety of the Hamaoka Nuclear Power Station

New seismic resistance guidelines: Seismic safety of nuclear power stations is checked according to the guidelines for seismic design evaluation of nuclear power reactor facilities (seismic resistance guidelines) set forth by the national Nuclear Safety Commission. The new seismic resistance guidelines were published in September 2006 with the aim of revising the old guidelines to incorporate the latest information and further improve the reliability of seismic safety at nuclear power stations. (The new quidelines do not refute the validity of the old seismic resistânce quidelines )

\*2 Seismic tolerance: A safety

resistance measured for a

facility against the level of

earthquakes anticipated in

Example of construction work for increased seismic tolerance

margin for earthquake

the applicable region.

Hamaoka Nuclear Power Station is located on rock bed and ensures resistance to earthquakes characterized by seismic motion with the maximum acceleration of 600 gals. This level of earthquake resistance was confirmed by national safety reviews in which a number of academics and experts participated. The station is also capable of withstanding, with a large safety margin, the Tokai earthquake predicted by the Central Disaster Prevention Council.

### Evaluation of seismic safety under the New Seismic Resistance Guidelines\*1

With the revision in September 2006, of the national guidelines to assess the earthquakeresistant design of nuclear power stations, all





tower to support the exhaust suspended with a pipe of approximately 100 tower crane meters in height

units of Hamaoka Nuclear Power Station are undergoing evaluation for seismic safety under the new seismic resistance guidelines. Evaluations of Unit 4 were completed in January 2007, and those of Unit 3 were completed in February. The required level of seismic safety was confirmed with both units, and the results were reported to the government. While the government is still confirming the results, we are proceeding with the evaluations of the remaining units

These evaluations were conducted in response to a government order as part of its effort to further improve the safety of nuclear power stations.

### Construction work for increased seismic tolerance\*2

Prior to the revision of the national seismic resistance guidelines, a review was conducted from July 2001 to examine the proposed revisions to the guidelines. By taking this opportunity, we voluntarily conducted construction work to improve the seismic tolerance of Hamaoka Nuclear Power Station. This project was initiated to show to the community that, as a company operating a power station in the Tokai region where a large earthquake is anticipated, ensuring the safety of local residents is our top priority. To be specific, we set a target seismic activity stronger than the reference level, and made necessary improvements so that the station will withstand this higher level of seismic activity. The construction work is scheduled to be completed in the second half of fiscal year 2010 for Units 1 and 2, and in the second half of fiscal year 2007 for Units 3, 4 and 5.

HP > Nuclear Power Generation > Earthquake Measures at Power Stations

### **MOX Fuel Plan at Hamaoka Nuclear Power Station**

### The need for MOX fuel

Japan is an energy-poor country, and at the same time a major consumer of energy. In order for Japan to ensure a reliable source of energy in the future while curbing global warming, it is an absolute necessity to promote the use of nuclear power generation that does not produce carbon dioxide emissions, and also establish a nuclear fuel cycle by carrying out a MOX fuel (pluthermal) program.

MOX fuel, called "pluthermal" in Japan, is a system whereby a nuclear power station reuses plutonium that has been isolated by reprocessing the spent uranium fuel. The use of plutonium uranium mixed oxide fuel, or MOX fuel, is a key component of Japan's national policy for utilization of nuclear power because it allows for effective utilization of uranium resources. It is to be introduced in electric power companies all over Japan.

Chubu Electric Power is also planning to commence a MOX fuel project starting from fiscal year 2010 at Hamaoka Nuclear Power Station Unit 4 (rated electricity output: 1.137 GW).

> Nuclear Power Generation > Nuclear Fuel Cycle and MOX fuel

### Key events until use of MOX fuel



Progress of the plan

In March 2006, we submitted to the government a request for permission to alter a nuclear reactor installation, in connection with our plans for a MOX fuel reactor at the Hamaoka Nuclear Power Station Unit 4. Thereafter, we received the preliminary review\*2 by the Ministry of Economy, Trade and Industry (Nuclear and Industrial Safety Agency), followed by the secondary review by the national Nuclear Safety Commission and the Atomic Energy Commission of Japan. In July 2007, we finally received permission from the Minister for Economy, Trade and Industry. We will continue to make preparations toward use of MOX fuel\*3.

### With community awareness

The intention of Chubu Electric Power when implementing the "pluthermal" plan is to first and foremost create awareness and understanding among the community. In line with this idea, we will maintain a dialog with local residents to give them a fuller understanding of our MOX fuel plans, providing a toll-free number we introduced before filing the request to alter the nuclear reactor installation. We will report on the progress of the plan on a regular basis.

Pluthermal: "Pluthermal" is a Japanese word which combines two English words "plutonium" and "thermal". It refers to the utilization of plutonium fuel in commercial (thermal) nuclear power plants. In English, the fuel is commonly referred to as plutonium uranium mixed oxide fuel, or MOX fuel. MOX fuel is reprocessing spent plutonium fuel generated by a nuclear power station. which is recovered and then mixed with uranium to create MOX fuel that can be used in a thermal reactor (light water reactor used by current nuclear power stations).

\*2 Preliminary review (safety review): An electric power company wanting to change a key safety facility at its nuclear power station must apply for and receive the government's permission to change a nuclear reactor installation. When an electric power company files a request alter a nuclear reactor installation, the government will review the request to determine if sufficient disaster prevention measures have been taken. These reviews are called "safety examinations," and consist of preliminary and secondary reviews.

\*3 MOX fuel: An abbreviation for "Mixed Oxide Fuel" created by mixing uranium and plutonium in oxide state.

In the preliminary review, the Ministry of Economy, Trade and Industry (Nuclear and Industrial Safety Agency) examines if sufficient disaster prevention measures have been taken. In the subsequent secondary examination, the Atomic Energy Commission of Japan confirms that nuclear energy will be used for peaceful purposes, while the Nuclear Safety Commission double-checks on safety, etc. The two-step review process ensures thorough assessment.



## Environment

Environmental Performance



### **Chubu Electric Power Group Environmental Declaration**

## System for Protecting the Global Environment

lanagement and Ec

Environmental Performanc

## Chubu Electric Power Group Environmental Declaration

### **Environmental Philosophy**

We will conduct ourselves responsibly and in good faith as members of the energy industry, and strive to protect the global environment through local, regional, and international cooperation.

### **Environmental Vision**

We will promote global environmental conservation and contribute to the development of local communities capable of sustainable growth. Transforming ourselves into a corporate group that enables each member to share in the environmental culture



### Promotion of Environmental Management

To achieve sustainable growth, it is important for every company to eliminate or minimize any negative environmental impacts resulting from their economic activities.

At Chubu Electric Power, we consider it our mission to ensure a stable and affordable supply of energy and to consider environmental preservation in our business activities. For Chubu Electric Power, "Environmental Management" means accomplishing this mission without fail. To consistently carry out our environmental management activities, we collaborate with Group companies and have in place a crossfunctional system so that all departments and branches can work together under the leadership of the President.





### Environmental Measures Support Council

**Environmental Performance** 

The Council, chaired by the General Manager of the Plant Siting and Environmental Affairs Division, was instituted in April 1990. It engages in discussion and coordination of basic policies, action targets and specific measures related to preservation of the environment.

### Chubu Electric Power Environmental Forum

The Forum was established in 1993 with the aim of raising the level of environmental management. Through it, external experts deliver their views on our environmental measures directly to our president.

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### Chubu Electric Power Group Environmental Measures Committee

We instituted the Committee in April 2001, for the purpose of increasing group cohesion and reinforcing environmental measures among the members of the Group.

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34th Environmental Measures

Support Council

28th CEP Environmental Forum



13th CEP Group Environmental Measures Committee

	Environmental Performance			Environmental Performance					
		Action Pl	an: Guideline 1-2						
								Environmental P Action Plan	
					■ Self-evaluation Level 5: (attainment of long-term goal) Level 4: (attainment of medium-term goal) Level 3: (attainment of goal	(goal not ye attained)		Social Perfor	
Guidelin Action Obj	ie jectives	Details	Long-Term Goals (up to FY2013) Transforming into a Company that Promotes Environmentalism	Mid-Term Goals (up to FY2008) Promoting Environmentalism in Chubu Electric Power	Results for FY2006	Self- evaluation	Future Initiatives	See page	
We will use Implement Renewable	tation and e Energy.	es effectively.	Complying with provisions in the Law on Spe Energy, etc. (RPS Law) (Target: 16 TWh across Japan by FY2014 (c provide an estimated 2.3 TWh*!)) > Increasing in-house wind power and small-hydr system to generate power from untapped energ	ecial Measures for the Utilization of New of which Chubu Electric Power will opower generation output, implementing a y sources (biomass, etc.)	Gained an additional 520 GWh through increased purchase of surplus wind power and other sources (wind, solar, biomass, small-hydroelectric: developed in-house and purchased) Studied development/introduction of in-house wind power plan Developed a biomass co-firing plan for a coal-fired thermal pow station	t over	Developing and introducing wind-power generation, biomass co-firing in coal-fired power stations and sn hydroelectric power stations for commercial use, wh ensuring economic efficiency and a stable supply of electricity. In-house wind 34 MW from 2 sites in FY200 power generation: 46 MW from 3 sites in FY200 Continuously purchasing surplus power and promot the use of renewable energy	nall- ile )8 <b>P. 34</b> j9 ing	
Efficient	Promoti Generat	ng Nuclear Power ion*²	Maximizing the safe usage of nuclear power and promoting safe nuclear fuel recycling > Implementing a plutonium thermal system (by F	generation facilities (85% utilization rate) Y2010)	Capacity utilization rate of 49.2% due to a facility shutdown of Hamaoka Nuclear Power Station Unit 5 caused by damaged low- pressure turbine blades, and long-term shutdown of Units 1 and 2. (69.9% for all 55 nuclear power station units in FY2005)	0	Further increasing the utilization rate of nuclear pow generation facilities, while giving top priority to safet Promoting nuclear fuel recycling, in line with Japane national policy	er y se P.36	
Use of Energy	Improvir of therm	ng thermal efficiency al power plants	Achieving Japan's highest level of efficiency thermal efficiency of at least 45.8%) > Reducing electricity usage inside our power stat	through continuous improvement (overall ion, setting up world-class facilities	Achieved gross thermal efficiency of 45.07% through efficient utilization, despite the shutdown of Hamaoka Nuclear Power Station Unit 5 and increased power demand. (43.1% for all 10 power companies in FY2003)	•	Preferentially operating highly efficient power stations, an reducing in-station energy use. Promoting development of Shin-Nagoya Group No.8 (FY2 and Joetsu Group No.1 (FY2012) and 2-1 (FY2013).	<sup>1</sup> 2008), <b>P. 36</b>	
	Reducin and dist	g power transmission ribution loss	Maintaining a power transmission/distribut	ion loss rate of less than 5%	Reduced to 4.51% through efficient operation of power distribution facilities (5.1% for all 10 power companies in FY2005)	0	Continuously maintaining high standards	P. 37	
We will red Proactive re of CO <sub>2</sub> and	uce our e eduction other	nvironmental load. Reducing CO2 Emissions* <sup>3</sup>	Reducing the average energy intensity by 20 (below FY1990 level)	% for the period from FY2008 to FY2012	Increased base unit by 3.6% over FY1990 levels, to 0.481 kg-CO2/kWh, partly due to the shutdown of Hamaoka Power Station Unit 5 and increased sales volume of electricity.	0	Improving the capacity utilization rate of nuclear power sta by giving top priority to safety improving gross thermal efficiency by developing a high- efficiency LNG thermal generator Promoting renewable energy generation, including the development of in-house wind power generators Procuring credits through use of Kyoto mechanisms	itions P. 38	
greenhouse emissions	gas	Improving SF6 Gas Recovery Rate	Maintaining a High Recovery Rate (over 9 inspection)	9% at dismantlement, over 97% at	Achieved 99.3% at dismantlement and 99.6% at inspection through introduction of collection system and improved management technologies	•	Continuously maintaining high standards	P. 39	
Attainment Emissions* Sustainable	of Zero and a Society		Promoting activities aimed at achieving zero emissions	Reducing external landfill waste by decreasing waste, and increasing recycling and reuse	Maintained the ratio of external landfill wastes at less than 1%, although the absolute landfill volume increased by 3,000 tons over the previous fiscal year's level to 11,000 tons Expanded sales channels for Circulash to the agricultural market, and received orders for environmental test kits.	•	Promote the 3 Rs*s further to reduce external landfil wastes, while considering economic efficiency Expand sales channels for Circulash	P. 41 P. 42	
Encouragen	nent of	Reducing SOx Emissions* <sup>3</sup>	$\checkmark$ Maintaining the highest standards in the w	rorld	0.05 g/kWh (0.7 to 3.9 g/kWh in Europe and U.S. in 2002; 0.2 g/kWh in Japan in FY2005)	٢	Continuously maintaining high standards	P. 43	
environmen conservatio measures a	ital n t power	Reducing NOx Emissions* <sup>3</sup>	$\checkmark$ Maintaining the highest standards in the w	rorld	0.09 g/kWh (0.6 to 2.0 g/kWh in Europe and U.S. in 2002; 0.3 g/kWh in Japan in FY2005)	•	Continuously maintaining high standards	P. 43	
stations		Reducing the public's effective radiation exposure	$\checkmark$ Maintaining a level below 0.001 millisiever	t/year	Less than 0.001 millisievert/year through appropriate management of radioactive materials (in the vicinity of Hamaoka Nuclear Power Station)	0	Continuous and rigorous control	P. 44	
Thorough Managemen Chemical Substances	nt of	Supporting PCB Treatment	Treatment of all devices containing PCBs	Promoting comprehensive treatment of pole-mounted transformers containing low concentrations of PCBs	Treated all insulating oils with low levels of PCBs Constructed facilities to treat pole-mounted transformer containers and parts Began treating equipment with high levels of PCBs, but encountered some delays due to facility problems	0	Ensuring treatment of insulating oils with low levels PCBs, construction of facilities to treat pole-mounter transformer containers and parts, treatment of affec containers/parts and treatment of equipment with hi levels of PCBs	of I ted <b>P. 45</b> gh	
Expansion of environmen friendly acti	of Itally- ivities	Encouraging nature conservation activities	Sponsoring conservation activities related to our domestic and international business > Planting trees at deserted coal mine	Actively promoting conservation activities in our service territory > Eco Park (environmental preservation facility adjacent to Hekinan Power Station), forests owned by Chubu Electric Power	Constructed facilities that harmonize with the scenery, such as Shin-Nagoya Group Unit 8, etc. Properly maintained and managed the community partnership facility near Hekinan Power Plant Trained "Chuden Foresters," or forest volunteers working main in Uchigatani Forest, and organized programs to let people experience the wonderful natural world of forests	ly O	Continuously promoting the construction of facilities harmonize with nature and the scenery Continuously implementing forest-conservation active with focus on the Uchigatani Forest	<sup>that</sup> P. 46 <sup>(ities,</sup> P. 54	
		Supporting tree	Giving away 16,000 saplings per year		Gave away 18,770 saplings (cumulative total of 317,000 since 1985)		Continually support development of greenery-rich communities.	P. 46	

Environmental Performance

\*1 Estimated from the power supply/demand projections and supply plans released by the Japan Electric Power Survey Committee.
 \*2 Facility utilization rates vary every year depending on whether or not a periodical inspection is held. In order to eliminate this variance, the rate is calculated over an extended period of time (averaging over 5 years).
 \*3 The CO<sub>2</sub> emission base unit is calculated per electricity generated.

\*\* Reducing volume of waste sent to external landfills, including waste from contractors (waste generated due to work ordered by us) to less than 1% of entire volume of waste.
\*\* The 3 Rs of waste; Reduce, Reuse, and Recycle

ental Performance an

. 45

	Environmental	Performance		Environmental Performance				
	Action Pl	an: Guideline 3-4					P	
							E	nvironmental Performance ction Plan
				Evel 5: Level 5: Level 5: Level 5: Level 4: Level 3: Level 3: Level 3: Level 3: Level 4: Level 5: Level 5	(goal not ye attained)	v: Level 1: (need for >: improvement)	Maintenance Management Goals Example of Actual Approaches	
Guideline		Long-Term Goals (up to FY2013)	Mid-Term Goals (up to FY2008) Promoting		Self-			See
Action Objectives	Details	that Promotes Environmentalism	Environmentalism in Chubu Electric Power	Results for FY2006	evaluation	Future Initiativ	es	page
We will improve ou	r level of environmenta	al management.						
Undertaking strict environmental management in recognition of the potential	Thorough Environmental Management	Promoting the Environmental Management System (EMS) among Chubu Electric Power Group companies > Utilizing EMS among Chubu Electric Power Group companies	Achieving a 100% EMS Implementation Rate** in the Chubu Electric Power Group > Expanding group-wide environmental management activities > Implementing more effective and efficient EMS > Establishing an in-house environmental accounting system and environmental indicators that contribute to environment management	Achieved 97% EMS introduction rate throughout the Company (supported establishment of EMS in offices and plants not yet utilizing the system) Set the Chubu Electric Power Group EMS Standard, under which 19 companies introduced EMS (94% EMS introduction rate) Established an environmental activity guideline for Group companies		Achieving 100% EMS Electric Power Group Introducing EMS to Ch plants not yet utilizing Providing support for E companies not yet utili	ntroduction rate within the Chul ubu Electric Power offices and he system .MS introduction at Group zing the system	P. 47 P. 50
environmental impact of our business operations	Promoting Green Procurement	Promoting environmentally-friendly products in society through green procurement cooperation > collaborating with other companies to establish common indices	Promoting Green Procurement > Achieving a 100% green procurement rate for office supplies > Establishing environmental evaluation standards for materials and equipment > Encouraging green procurement among Group companies > Furthering education for suppliers	Achieved 94% green-procurement rate for office supplies Completed an environmental assessment for seven representative materials/equipment Began environmental assessment for production methods		Further increasing awa purchasing for office su Building environmenta materials and equipme Conducting environme methods	reness of the importance of gre upplies assessment database for nt ntal assessment for production	P. 48
Training personnel ca independently taking environmental concer communities	apable of action on rns within local	Training personnel capable of independently taking action on environmental concerns within the local community > Preparing "Environmental activities at home and in the community > Establishing a Forest Volunteer Activity System	Encouraging environmentally- conscious business and lifestyles > Furthering environmentally conscious business activities and training volunteer leaders > Improving environmental education at Group companies > Promoting environmentally-friendly lifestyles among employees and their families	Held Executive CSR Seminar for managers in the Chubu Electric Power Group Cumulative total of 2,144 have experience as environmental trainers, and 95% have taken e-learning courses Trained 20 Chuden Foresters, or volunteer forest conservation activity instructors, and nine Forest Environment Education Instructors Implemented Chubu ECO Point Program, with participation by Group companies, to promote voluntary efforts by employees and their families Distributed environmental learning materials to Group companies and held workshops		Continuing to train Chu Environment Educatio Expanding Chubu ECC Encouraging Group co environmental educatii Working with co-ops, e promote environmenta community	Iden Foresters and Forest Instructors Doint Program mpanies to provide no to their employees tc., to examine ways to I activities at home and in the	P. 49 P. 50 P. 54
We will advance enviro	nment-related communicati	on and enhance cooperation with the commur	ity on a local and global level.					
Improving interactive environment and ener	communication on rgy	Forging bonds of trust to foster greater understanding of the Group among society at large > Cooperating with communities to address society's needs	Improving Open, Interactive Communication Senhancing active information disclosure by Group companies and others > Modifying the environmental report to include social issues > Holding a wide range of meetings to exchange opinions, including "Stakeholder Meetings" > Giving tours of our workplaces and facilities	Compiled the CSR report by expanding the scope of the existing environmental report Added new content to our website, such as content for childrer Held stakeholder dialogues and backyard tours to promote understanding through observation of business activities Held Chubu Electric Power Elementary School Eco Session 2006 where elementary school children and the President discussed environmental topics (268 students from six schools participated in the event)		Continuously enhancir Holding repeated stake tours Continuing Chubu Elec Eco Sessions	g the website content holder dialogues and backyard tric Power Elementary School	P. 52 P. 53 P. 72
Cooperating with people from diverse	Cooperation with local communities	Working with local communities to create ecological towns > Cooperating with local communities in riverside areas through forest conservation activities > Consulting on projects using our technology and expertise, and cooperating in Eco-Town Projects > Setting up environmental seminars for citizens	Conducting activities with diverse groups of people through new collaborative organizations > Establishing new collaborative organizations and carrying out forest conservation activities in cooperation with NPOs and other groups > Improving children's environmental education > Actively promoting an ecological lifestyle, including energy efficiency > Actively promoting chub Electric Power Group technology through consulting business	Began Chuden Eco Partnership program in collaboration with civic organizations Began civic forest conservation activities, called "Invitation to the Forest," in cooperation with NPOs, etc. Taught 647 traveling classes, gave 284 tours of workplaces an facilities Popularized Eco Cute (contracts for approx. 53,000 units: cumulative total approx. 146,000 units) Promoted activities in collaboration with the Environmental Partnership Club of which Chubu Electric Power serves as chairman Group companies promoted environmental and energy conservation measures through ESCO project	id	Continuing implement program in collaboratio Repeatedly implement involvement program Frequently holding mo of workplaces and faci Constantly promoting E Organizing Club Continuously promoting Construction measure	tion of Chuden Eco Partnership in with civic organizations ing "Invitation to Forest" civic- bile classroom programs and to tities Eco Cute for efficient energy usi nvironmental Partnership g environmental and energy s through ESCO project	P. 4 P. 50 P. 54 P. 55 P. 64
	Cooperation with the World	Bringing together the expertise of the Chubu Electric Power Group to pursue global environmental conservation activities around the world > Initiating international projects related to global environmental conservation	Contributing to increasing environmental conservation in other countries using Chubu Electric Power Group technology - Executing projects aimed at CO2 reduction in developing nations (CDM) - Supporting methane gas recovery and use in power generation - Supporting technological development of biomass-based power generation	The Thai project to generate power from rice hulls filed an application for CDM registration with the United Nations Participated in a palm oil biomass power generation project in Malaysia Funded PCF and JGRF*r and contributed to global efforts to combat global warming through projects to reduce greenhouse gas emissions in developing countries Carried out environmental forestation in coal-mining regions in Australia and elsewhere	, 🔘	Continuously promotin project in Thailand to g developing and studyir Continuously funding F global efforts to prever to reduce greenhouse countries Continuously carrying coal-mining regions in	g overseas projects, such as a enerate power from rice hulls, a g new projects VCF and JGRF, and contributin, t global warming through projec gas emissions in developing but environmental forestation in Australia and elsewhere	and <b>P. 39</b> pts <b>P. 56</b>

\*\* Chubu Electric Power is certified under ISO 14001. The Chubu Electric Power Group companies comply with the Group's EMS Standard (ISO 14001, environmental activity evaluation program, etc.)
\*\* PCF = Prototype Carbon Fund, JGHF = Japan Greenhouse Gas Reduction Fund

### **Business Activities and Environmental Impact (FY2006)**

### **Environmental Accounting**

Management and Ecor Performance

Environmental Performance

Social Performance

## **INPUT**

Fuel for Power generation		Materials		Vehicle fuel		
Coal	10,013,000 t	Calcium carbonate	159,000 t	4,210	d	
Heavy oil	52,000 kl	Ammonia	18,000 t	Deven Developed from		
Crude oil	1,444,000 kl	Other (caustic soda, etc.)		Power Purchased from Other Companies		
Light fuel oil LNG	13,000 kl 9,910,000 t	Water		18.3 TW Including the following types renewable energy	<b>1</b> of /:	
LPG	154,000 t	Thermal power	10,250,000 t	<ul> <li>Solar (photovoltaic) Power 110.65 GW</li> </ul>	h	
Nuclear fuel (	uranium) 49 t	(for industrial use) Nuclear power	260,000 t	•Wind (wind turbine) Power 155.57 GWh		
		(for industrial use)		•Waste Materials 279.72 GW	h	
Power Gene	erated by Chub	u Electric Stations (The	rmal, Nuclear, H	ydro) 127.4 TWh pumping 1.6 TWh 1.6 TWh	wate	

## OUTPUT

Atmospheric Emissions, Wastewater, etc.			
CO <sub>2</sub>	63,780,000 t		
CO <sub>2</sub> 10,000 t			
SOx 5,000 t			
NOx	9,000 t		
Wastewater	3,870,000 t		
Waste heat	637 PJ		
Others (soot dust, etc.)			
Provisional Estimate			
CO2 absorbed by			
company-owned 13,000 t			
green areas			

### In-house electricity consumption/ Power-transmission loss 11.4 TWh

Industrial Was	ste, Byproduct	ts, etc.
Coal ash		937,000 t
Gypsum		293,000 t
Heavy and crude oil	ash	3,000 t
Sludge		72,000 t
Spent nuclear fuel	Uranium	47 t
	Plutonium	0.5 t
	Fission Product	t 1.5 t
Radioactive solid wa (barrel equivalent)	aste	1,436 bbl

Electric Power Sold 132.7 TWh We are expanding our environmental accounting in order to increase public understanding of our positions and actions related to environmental preservation. This will also allow us to achieve higher levels of both management efficiency and environmental preservation.

In 2006, environmental preservation investments amounted to 21 billion yen; other environmental expenses totaled 157.8 billion yen. These amounts represented 14.0% and 8.5% of our capital investment and total operating expenses, respectively.

### **Environmental preservation costs**

### Principles applied in Tables

Environmental Performance

Tables were created by referring to "Environmental Accounting 2005" (published by the Ministry of the Environment), and incorporate our categorization and calculation criteria.

Period created: April 1, 2006 through March 31, 2007 Scope of tables: All corporate facilities

Category	Items	Investme	ent (100 mi	llion yen)	Expense	es (100 mill	ion yen)
outogory	itorito	FY05	FY06	Changeover	FY05	s (100 million yen FY06 Change 117 585 - 215 2 17 62 571 - 9 1,578 - - 8,59	Changeover
Global environmental preservation	Global warming prevention and Ozone Layer preservation	7	13	6	99	117	18
Regional environmental preservation	Air pollution prevention, Water pollution prevention, etc.	22	33	11	629	585	- 44
Resource recycling	Resource conservation, Industrial waste measures, and Radioactive material measures	27	19	- 8	217	215	- 2
Purchase of low environmental impact products, etc.	Electric and low-pollution vehicles, etc.	3	3	0	2	2	0
Management programs	Personnel costs related to environmental preservation measures. Costs for obtaining and maintaining ISO 14001, etc.	1	2	1	20	17	- 3
Research and development	Environment-related research and development	0	0	0	67	62	- 5
Social programs	International cooperation, Landscape protection, Greening, Natural environment preservation, etc.	128	139	11	589	571	- 18
Environmental damage countermeasures	Pollution impact levy under the pollution-related health damage compensation system	0	0	0	9	9	0
Total			210	23	1,633	1,578	- 55
Percentage of total capital investment			14.0%	- 1.1%	-	-	-
Percentage of to	tal electric utility business expenses	-	-	-	9.4%	8.5%	- 0.9

\* Totals may not match because figures have been rounded down to the nearest 100 million yen.

Basis for Calculation Investment and expenses for the prevention, reduction or avoidance of environmental burden; environmental impact reversal; and damage restoration are taken into account. - Investment is the amount of capital investment used for environmental protection.

- Costs associated with investment such as depreciation, equipment leasing, and maintenance and operating costs are calculated by taking into account factors such as the lifespan of each type of facility or equipment.

Environmental preservation impact	landfills increased by 3,000 tons, on a year-to-year basis.

Catagony		Itome	Indicators		
	Calegory	iteriis	FY05	FY06	
Global	0111111111111	Basic Unit of CO <sub>2</sub> Emissions	0.452 kg-CO2/kWh	0.481 kg-CO2/kWh	
environmental	Global Warming Prevention	Power purchases from renewable energy sources	470.02 GWh	545.94 GWh	
preservation	revention	SF6 recovery rate (at inspection time)	99.2%	99.6%	
Regional	Air Pollution	SOx emission (for thermal power stations)	0.06 g/kWh	0.05 g/kWh	
Preservation	Prevention	NOx emission (for thermal power stations)	0.09 g/kWh	0.09 g/kWh	
Resource	Industrial Waste Measures	Landfill waste at outside locations	8000 t	11,000 t	
Recycling	General Waste Measures	Waste paper recovery rate	91.2%	90.2%	
Social	Landscape Protection	Total length of power distribution cables laid underground	32 km	26 km	
Programs	Greening	Green area at power stations	2,446,000 km <sup>2</sup>	2,401,000 km <sup>2</sup>	

These figures indicate the levels of environmental burden reduction and avoidance associated with our business operations, as well as environmental improvements made by Chubu Electric Power, and are limited to those related to environmental preservation costs.

### Economic impact of environmental preservation measures

Catan		Itome		Amount (100 million yen)		
Category		items		FY06	Changeover	
Global environmental preservation	Global Warming Prevention	Fuel cost reduction due to change in gross thermal efficiency of thermal power stations, etc.	- 17	6	23	
Resource Recycling	Industrial Waste Measures	Sales income from recycled gypsum, coal ash, etc., and reduced expenses due to reuse of transformers and other equipment	80	78	- 2	

These figures represent changes in gains on recycling of gypsum and other waste and expenses related to environmental conservation.

### Guideline 1 We will use resources effectively.

Environmental Performance Guideline 1

Social Performance

Since the power industry consumes a great deal of natural resources, including fossil fuels, we view the effective use of resources as a critical aspect of our environmental preservation policy. We are working hard to promote the implementation and development of renewable energy, as well as the efficient utilization of resources.

### **Development and Utilization of Renewable Energy**

Despite shortcomings such as low energy density and unstable output, renewable energy<sup>\*1</sup> helps reduce consumption of fossil fuels and alleviate environmental load.

We are implementing various efforts to promote renewable energy, such as installing photovoltaic and windpower generation facilities at our facilities, and promoting the development and research of commercial-scale wind power generation. We are also purchasing surplus electricity from our customers and providing support for the Chubu Green Power Fund.

Installation of systems at plar	photovoltaic and wir nts (as of the end of FY	nd power generation (2006)			
	Facilities	Output (kW)			
Photovoltaic	48	539			
Wind power 2 267					

Wind power generation and

hydropower generation

Wind power generation

We are developing commercial-scale wind power

operating at two sites in February 2009 (34 MW)

develop Wind Park Kasadori (approx. 38 MW) in

generation systems. These systems will start

Group company C-Tech Corporation began

operating Wind Park Misato (16 MW) in

February 2006. C-Tech is also planning to

the adjacent Nunobiki mountain range.

and at three sites in 2009 (46 MW).

- \* Energy sources that are not depleted through consumption, such as sunlight, wind, biomass, and water.
- \*2 An organic substance derived from animal or plant that can be used as an energy source.
- \*> Taking effect in April 2003, the RPS (Renewable Portfolio Standards) Law requires electric power suppliers to meet a certain percentage of their generation output with new energy sources, such as photovoltaic, wind power, biomass and small- and medium-scale hydropower (water channel type, with a power generation capacity of 1 MW or less).

### Hydropower generation

We are committed to making effective use of our water resources. We have 182 hydropower stations, which generate 5,220 MW of electricity. We are also developing small hydropower plants using unused drop-offs at existing dams.

## Biomass\*2

We are promoting the use of biomass to reduce environmental loads.

### Mixed Combustion of Woody Biomass Fuels at Hekinan Thermal Power Plant

We are planning to start mixed combustion of woody biomass fuels as of FY2009, at the coalfired Hekinan Thermal Power Plant. The plan calls for power generation from woody biomass fuels to account for approximately 2% of total output from the Hekinan Thermal Power Plant. Power generated from biomass (estimated to be approx. 470 GWh per year) will be counted toward the power generation requirement specified under the Special Measures Law Concerning the Use of New Energy by Electric Utilities (Japanese RPS Law)<sup>45</sup>. Other efforts

- Study of converting sewage sludge to biomass fuel (jointly with Aichi Prefecture)
- Demonstration project of molten carbonate fuel cells (MCFC) using methane gas generated by fermenting wet refuse, promoted by the New Energy and Industrial Technology Development Organization (NEDO) (Tokoname City, Aichi Prefecture)
- Development of high-efficiency gas engine generation system using woody biomass fuel
- Research and development of small-scale power system with biomass direct injection (combination of biomass direct-injection burner and Stirling engine)

## Support for expansion of renewable energy

### Purchase of renewable energy

We purchase surplus power generated from renewable energy sources, such as photovoltaic



and wind power, to promote the use of renewable energy.

### **Chubu Green Power Fund**

In October 2000, we instituted the Chubu Green Power Fund. Under the Fund, we collect monthly 500-yen donations from customers who support power generation from renewable energy, and use these funds to encourage its development. As of the end of fiscal year 2006, we have received 999 donations from 1,291 customers. To ensure transparency in the receipt and use of donations, the Fund is being managed by the Chubu Industrial Advancement Center. We are publicizing the Fund over our website, and match customer donations with our own contributions.

URL http://www.ciac.or.jp/green/ Chubu Industrial Advancement Center

The Chubu Green Power Fund Mechanism

# Participants receive a Green Label and notifications of grants and results



Environmental Performance Guideline 1

### **Efficient Utilization of Energy**

Guideline 1 We will use resources effectively.

We are acting to ensure more efficient utilization of energy, by increasing the capacity utilization rate of nuclear power stations, recycling nuclear fuel, and improving the thermal efficiency of thermal power stations.

### Increase in the capacity utilization rate of nuclear power stations

We are striving to make efficient use of nuclear power station facilities while taking every safety precaution.

\*1 Out of the thermal energy of

capable of transmission as

electrical power: an indicator

utilization at a thermal power

of the efficiency of energy

station

the fuel consumed, the

percentage of energy

The capacity utilization rate at Hamaoka Nuclear Power Station dropped to 49.2% (average over last five years; 41.5% for 2006), due to the longterm shutdown of Units 1 and 2 and a shutdown of Unit 5 due to a low-pressure turbine problem. As our customers expect, safety will continue to be our top priority as we operate and run the Hamaoka Nuclear Power Station.



### **Recycling of nuclear fuel**

In Japan, nuclear fuel recycling forms the basis of the national nuclear power policy. Reprocessing spent fuel to efficiently use uranium resources can pave the way for assurance of a long-term energy supply through nuclear power. For Japan, with scarce domestic energy resources, nuclear fuel recycling is a

valuable tool for ensuring energy supply stability. Spent fuel can be reprocessed to separate highly radioactive wastes to be treated. Since not all spent fuel is waste, the amount of fuel generated can be reduced.

### Increase in the thermal efficiency\*1 of thermal power stations

An increase in the thermal efficiency of thermal power stations could result in reduced fuel use and CO2 emissions. We are striving for higher thermal efficiency by installing high-efficiency combined-cycle generation systems and effectively operating high-efficiency thermal power stations.

The gross thermal efficiency of our thermal power stations was 45.07% in FY2006 (based on lower heating value).

### Implementation of leading-edge combined-cycle power generation

We are developing high-efficiency combined cycle power stations, such as Shin-Nagoya Thermal Power Station Group No.8 (1,458 MW; Nagoya City, Aichi Prefecture) and Joetsu Thermal Power Station (Group 1 and 2, each 1,190 MW; Joetsu City, Niigata Prefecture).

Shin-Nagoya Thermal Power Station Group No.8, which is scheduled to start operation in FY2008, uses a combined cycle power generation system that utilizes 1,500°C-class gas turbines to achieve a power generation efficiency of approx. 57% (based on lower heating value). Combined cycle generation will also help reduce fuel costs and CO2 emissions.

Joetsu Thermal Power Station will start operating Group 1 (1,190 MW) in FY2012. Group 2 will start operation in FY2013, ahead of the original schedule, to cope with increasing demand and reduce CO2 emissions. The initial generation capacity will be limited to 595 MW, or half the total capacity.

countries (based on lower heating value) (200

22.2

(%)

45

40

35

32.0

India



We have been actively implementing measures to reduce power transmission and distribution losses, such as installing high-voltage power transmission lines and transformer facilities generating low transmission losses, and utilizing power grid systems designed to reduce electric power loss. Through these efforts, our power transmission and distribution losses in fiscal year 2006 were only 4.51% (one of the lowest levels among the 10 electric power companies in Japan)



Source: Statistics on Foreign Electric Power Industry, 2006 Ed., Japan Electric Power Information Center, Inc. Chubu Electric Power: FY2006; Japan: FY2005; Others: calendar 2004



Jorthern Japan

Europe

43.1

41.9



Environmental Performance Guideline 2

Social Performance

One of the greatest challenges facing management is the fight against global warming.

We have actively pursued a reduction in CO<sub>2</sub> emissions (per 1 kWh of electric power consumed) by efficiently operating our power generation facilities. We are also striving to completely eliminate industrial waste byproducts from our business operations, with the goal of helping to create a sustainable society.

### **Preventing Global Warming**

### **Reduction of CO<sub>2</sub> emissions**

Reduction of CO2 emissions resulting from power use requires efforts from both the company supplying the power and from consumers who must use it efficiently. We

### Measures to prevent global warming





consider it our duty to reduce the level of CO2 emissions per kilowatt-hour of power supplied to our customers in order to prevent global warming.

### Reduction of CO<sub>2</sub> emissions base unit

The base unit of CO2 emissions from our stations was 0.481 kg-CO2/kWh in FY2006, due in part to increased electricity sales, a long-term shutdown of Units 1 and 2 and a low-pressure turbine problem in Unit 5 at Hamaoka Nuclear Power Station. Total CO2 emissions were 63.78 Mt-CO2.

To reduce the base unit of average CO2 emissions by 20% below the 1990 level, in accordance with the Kyoto Protocol phase 1 commitment (FY2008 through FY2012), Chubu

### Breakdown of CO2 emissions by type of power generation



Electric Power is promoting renewable energy sources. Specific efforts include improved utilization of nuclear power plants, with top priority given to safety, development of highefficiency LNG thermal power generation systems, and in-house development of power generation systems utilizing wind power, biomass, and small-scale hydropower. We are also advancing the procurement of CO<sub>2</sub> credits by utilizing the Kyoto Mechanisms.

### Utilizing the Kyoto Mechanisms

We are actively utilizing the Clean Development Mechanism (CDM<sup>\*1</sup>) and Joint Implementation  $(\Pi^{*2})$  in order to combat climate change on a global scale.

Implementation of the Ky	pto Mechanisms
Capital contribution to funds	World Bank Prototype Carbon Fund (PCF)     Japan Greenhouse Gas Reduction Fund (JGRF)     Global/Asia Clean Energy Service Fund
Participation in projects	Thai project to generate power from rice hulls     Malaysian project to generate power from palm oil biomass
Procurement of CO <sub>2</sub> credits	<ul> <li>Procurement through CDM business</li> <li>3 wind power generation projects (approx. 400,000 tons in Ningxia Autonomous Region, approx. 500,000 tons in Gansu Province, and approx. 450,000 tons in Hebei Province, all in China)</li> <li>2 projects for waste methane gas recovery and use in power generation (approx. 600,000 tons in Nanjing, Jiangsu Province, and approx. 580,000 tons in Waxi bub in China)</li> <li>4 projects for N2O recovery and breakdown (approx. 950,000 tons in Hebei Province, China, and approx. 510,000 tons in Heb State of Karataka, India)</li> <li>2 projects for N2O recovery and breakdown (approx. 950,000 tons in Henan Province, China, and approx. 510,000 tons in Usan. South Korea)</li> <li>5 Control Dirac Multi Agan Carbone Finance, Ltd. (up to approx. 2 million tons)</li> <li>9 Unit purchases with Jagan Carbone Finance, Ltd. (up to approx. 2 million tons)</li> <li>9 Purchases from EcoSecurities (up to approx. 2 million tons)</li> </ul>

### Reduction of non-CO2 greenhouse gases

We are also working to reduce the emissions of non-CO2 greenhouse gases. Key non-CO2 greenhouse gases handled by electric power suppliers include sulfur hexafluoride (SF6) used in insulation for power facilities. We are implementing measures to minimize the release of SF6 gas into the air during inspection and removal of facilities.

Reduction of non-CO2 greenhouse gases

HFC

PFC

SF<sub>6</sub>

N<sub>2</sub>O

(sulfur hexafluoride)

(dinitrogen monoxide)

CH4 (methane)

### Development of CFC Breakdown & Treatment System

We have developed a CFC breakdown & treatment system capable of breaking down and treating CFCs that are known as a cause of ozone layer depletion and global warming. Unlike traditional treatment systems based on thermal decomposition, this system does not require a complex wastewater treatment process and is able to break down/treat CFCs at low

temperatures.

HFCs are mainly used in refrigerants for air-conditioning systems. Our efforts to reduce

SF6 is mainly used in insulation for power facilities. We are working to recover SF6 during inspection and

removal and 99.6% during inspection. SE6 emissions in EY2006 were equivalent to 60.000 t-CO2

was below the CH4 level in the air. Accordingly, there were practically no emissions.

We are working to reduce N2O emissions through improvement of power generation

The level of unburned CH4 generated from combustion of fuels at thermal power stations

repair, in order to reuse recovered gas for other purposes. The recovery rate in FY2006 was 99.3% during

PECs are used in liquid form in insulation for transformers and also in refrigerants.

HFCs include prevention of leaks and recovery of gas at disposal facilities.

Total emissions in FY2006 were equivalent to 12 t-CO2

Accordingly, PECs are not released into the air.

efficiency, among other methods

\*1 In CDM projects, a developed country joins a GHG emission reduction project in developing countries, and may count part of the resulting reduction as its own.

\*2 Under JI, a developed country (Annex 1) jointly implements a project for reduction of GHG emissions, and may count part of the resulting reduction as its own.

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### Management and Eco Performance

Environmental Performance Guideline 2

Coolel Devferment

## Reduction of greenhouse gases from transportation

We are actively working to reduce shipment volumes and improve the load factors on container ships and railway cars in the transportation of fuels and coal ash. To improve the efficiency of fuel shipments from overseas, we are encouraging the use of large container ships. Using large container ships to transport coal, we were able to cut transportation fuels and reduce CO2 emissions by approximately 22,000 tons. We are doing the same with LNG shipments and plan to expand the LNG receiving dock at Kawagoe Thermal Power Station and the Chita LNG No.2 receiving dock (owned jointly with Toho Gas Co., Ltd.) to allow large LNG tankers (200,000 m3 level) to come alongside the docks.

With the revision of the Energy Conservation Law, consignors are now required to implement energy efficiency measures during transportation. We will comply with the new requirement and strive to increase logistics efficiency further.



Chubu Electric Power's dedicated coal transport container ship "Yahagi Maru"

### Efforts of the Chubu Electric Power Labor Union

The Chubu Electric Power Labor Union is driving the "Save the Earth COCO" initiative to bring environmental conservation efforts closer to home. Specifically, the Union organizes activities that promote eco-friendly lifestyles at home, such as recommending employees to keep an environmental household account book, and using the union newsletter sent to members' families to suggest various things they can do at home to reduce  $CO_2$  emissions.

### Encouragement of workplace resource and energy conservation

We are working to reduce electricity, water and vehicle fuel used in offices. As a result of various energy/resource-conserving activities, in FY2006 we reduced electricity consumption, water consumption and vehicle fuel consumption by 8.4%, 13.0% and 17.8%, respectively, below FY1998 levels.

Chubu Electric Power is also a member of Team Minus 6%, which is a nationwide movement led by the Japanese government to help prevent global warming. Under the program, we are setting air-conditioning temperatures at appropriate levels and encouraging employees to wear cooler, more casual attire in summer.

CO <sub>2</sub> emissions from electricity consumption in offices and vehicle fuel consumption		
Electricity consumption in offices	Approx. 65,000 t-CO2	
Vehicle fuel consumption	Approx. 10,000 t-CO2	

## Received the Grand Prize at STOP Global Warming Awards

The award ceremony for the Grand Prize and other awards under the "STOP Global Warming Action Campaign" was held in February 2007. At the ceremony, the Shimada Sales Office of our Shizuoka Branch received an award for its commitment to the prevention of global warming throughout the year, with programs such as the campaign against vehicle engine idling, organization of environmental/power saving workshops, and delivery of seedlings.

### Waste Reduction

### Targeting zero emissions

We set the target of zero emissions in fiscal year 2004, and have been engaged in various activities to meet this goal based on the 3 Rs of reducing, reusing, and recycling waste, including waste produced by our contractors. Waste generated from our facilities amounted to 1,417,000 tons in FY2006. Landfill waste increased by 3,000 tons to 11,000 tons, due mainly to increased waste material from construction work associated with the removal of decommissioned thermal power generation facilities. We will continue to study effective uses of outside landfill waste, and make every effort to achieve our target of zero emissions.







### Industrial waste, waste byproduct and amount recycled (FY2006, unit: 10,000 t)

	Amount Generated	Amount Recycled	In-house Landfill (used as landfill material)	Outside Landfill
Coal Ash	93.7	93.7	0	0.0
Heavy / Crude Oil Ash	0.3	0.3	0	0
Gypsum	29.3	29.3	0	0
Sludge (including solidified sludge)	7.2	2.1	4.7	0.2
Waste Plastic	0.3	0.1	0	0.2
Metal Scrap	2.4	2.4	0	0.0
Glass and Ceramic Scrap	0.2	0.0	0	0.2
Construction Debris	7.4	7.0	0	0.4
Others (waste oil, waste alkali, etc.)	0.8	0.6	0	0.1
Total	141.7	135.5	4.7	1.1

Note: Total may not match because the figures are rounded off to two decimal places.

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Environmental Performance Guideline 2

Social Performance

### Effective use of coal ash

As a material coal ash has many outstanding properties, including making materials finergrained, lighter, and stronger. We have a wide range of recycling methods, in order to effectively utilize our limited resources.

### Utilization for adsorption of dioxins

Many waste incineration facilities operated by local governments use active carbon in fine powder form to reduce dioxins and other toxic substances contained in exhaust fumes. We offer Circulash\*, a product that exhibits high dioxin adsorption power, for use in these applications. Circulash is used by municipally operated incineration facilities in Tochigi Prefecture as a powder agent to reduce dioxins and other pollutants.



\*2 A unit designating the degree of radioactive influence on the human body

\*1 Zeolite produced from coal

Thermal Power Station

(Zeolite is a mineral with

numerous pores in its structural crystal, and is

substances.)

ash generated at Hekinan

capable of adsorbing various

A truck delivering Circulash to an incineration facility

## Conversion of seashells to fertilizer

The seashell-to-fertilizer recycling activity at Hamaoka Nuclear Power Station received the "Reduce, Reuse and Recycle Promotion Council Chairman's Award" in 2006.

Hamaoka Station captures a large amount of seashells from the intake water chamber when collecting seawater to use as cooling water. To use these seashells effectively, the station is processing them and converting into fertilizer at the seashell conversion plant set up on the premises. Recycled fertilizer has been sold since



Seashell conversion plant

### Management of radioactive waste

The term "radioactive waste" refers to the waste generated at nuclear power stations. Radioactive waste produced at the Hamaoka Nuclear Power Station is treated with various methods adapted to the type and concentration, in order to prevent it from affecting the environment. After measuring the radioactivity to ensure safety, some of the gaseous and liquid radioactive waste is discharged into the atmosphere and the sea from exhaust pipes and ducts. We manage to keep the impact of this discharge on the surrounding area to no more than about one-fiftieth as high as the natural radiation (0.05 millisieverts\*2/year). As of the end of fiscal year 2006, we were safely managing 35,584 drums (in oil-drum equivalents) of low-level radioactive waste at the solid waste storage depot on the station premises. Since fiscal year 1992, we have sent a total of 20,773 drums to the Low-Level Radioactive Waste Disposal Center (operated by the Japan Nuclear Fuel Limited) in Rokkasho Village. Aomori Prefecture. There, the drums are stored underground (at a depth of at least 4 meters) after the radioactive material is sealed in.

### Promoting Environmental Conservation at Power Stations

We are paying close attention to the surrounding environment by implementing measures against air pollution, water pollution, noise, and vibration based on environmental conservation agreements with local municipalities, and we are monitoring the effectiveness of these measures.

At our power stations, we also carry out monitoring surveys of the surrounding area to verify that there is no impact on the environment.



### Air pollution prevention

Our thermal power stations are implementing a number of measures to prevent air pollution, such as expanding the use of LNG (which generates no sulfur oxides [SOx]), use of fuel oils containing low levels of sulfur, installation of sulfur and nitrogen scrubbers, and adoption of burners capable of reducing NOx (nitrogen oxides) production from combustion. Through these efforts, SOx and NOx emissions from our thermal power stations are among the lowest in the world based on quantity per unit power output.

We have also installed high-performance dust collectors, and are taking other steps to minimize soot emissions.

### Wastewater treatment

Water used at power stations is treated by comprehensive wastewater treatment systems before being released into the water systems of the outside environment. To reduce the effect of thermal effluent, we are adopting the deep-layer seawater intake and surface-discharge method, among others. We have also prepared for possible oil leaks by, for example, putting oil fences around vessels and stockpiling oilcollecting materials at all time.

### Noise and vibration prevention

We are working to prevent noise and vibration by constructing and installing buildings and equipment at optimal locations, adopting lownoise/low-vibration equipment, and installing silencing systems and sound-insulating walls.

### Observance of environmental laws, regulations and agreements

In FY2006, there was no violation of any environmental law or ordinance. (Refer to P. 20 for non-compliance events at power generation facilities and actions to prevent such events.)

### Comparison of power station SOx and NOx emissions in major countries



of Electric Power Companies of Japan Chubu Electric Power: FY2006; Japan: FY2005; Others: calendar year 2002

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Environmental Performance uideline 2

This oil is used in certain

in trace amounts was detected in 1989 (this is the

concentrations)

pole-mounted transformers.

insulation oil with low PCB

Accidental admixture of PCB

### **Radiation control in the** vicinity of the Hamaoka **Nuclear Power Station**

People are exposed to radiation and radioactive residents must not exceed 1 millisievert per year. The dose from the Hamaoka Nuclear Power Station, as estimated based on the amount of radioactive gaseous and liquid waste discharged, was less than 0.001 millisievert for fiscal year 2006

controlled substances based on in-house manuals

Approaches to emission reduction

To reduce the release into the atmosphere of

toluene, xylene and other pollutants contained in

paints, we are now using paints with significantly

lower levels of toxic substances or none at all.

also attempting to reduce emissions by other

means, such as revising the frequency of

We will continue to pursue these methods while

and other materials, while also improving the

methods of using these substances and

introducing alternative substances and

substances.

painting.

technologies to reduce emissions of PRTR

### **PCB** (polychlorinated biphenyl) treatment

We have devices both utilizing polychlorinated biphenyl (PCB) in high concentrations and polemounted transformers that utilize recycled insulation oil\*1 with accidental admixture of PCB traces. We have stored this equipment under strict control since 1974, when a ban was imposed on PCB manufacture, import, and use. Of these, we have been treating insulation with low concentrations of PCB at an Insulation Oil Recycling Center since February 2005. Treated oils are carried out as recycled oils (fuel oils, etc.) using tank lorries after confirming that the PCB content is below the standard level. We are also constructing the Transformer Recycling Center to treat containers and materials of pole mounted transformers containing low levels of PCB. The Transformer Recycling Center will start operation in the second half of FY2007. To reduce the environmental load, the Transformer Recycling Center will also have a rooftop garden and utilize construction materials using coal ash. Transformers and other equipment using insulation oils containing PCB (equipment with high PCB concentrations) are treated by the Japan Environmental Safety Corporation (JESCO).

According to the report submitted to the government by the Japan Electrical Manufacturers' Association in 2002, we are also implementing proper control over transformers and other equipment that have been found to contain trace amounts of PCB.

### Status of asbestos usage

We are committed to investigating and monitoring our asbestos usage, and publicize our asbestos initiatives in a timely manner. We used spray-on coatings containing asbestos in some of our buildings as soundproofing, insulation, and fireproofing materials, but we are currently implementing well-planned measures to remedy the situation, including asbestos removal. We also used products containing asbestos in some of our generator facilities' heat insulation, shielding, and other materials, but as these are molded products, it will not disperse under normal-use conditions. For this reason, we plan to gradually replace these products with asbestosfree products when we carry out periodic inspections, improvements, and repairs. We will continue to respond appropriately to asbestos issues, in accordance with national asbestos

policy and relevant laws and regulations. HP > Environmental Efforts > Key Circumstances of Asbestos Use

### Soil pollution prevention

Public health may be affected by coming into direct contact with soil contaminated with toxic substances, or by drinking underground water taken from contaminated ground. Chubu Electric Power is working to prevent soil contamination, while complying with and taking appropriate actions under all laws and ordinances designed to prevent soil pollution.



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substances in daily life. Annual exposure to natural radiation from cosmic rays and radioactive substances in soil and food amounts to about 2.4 millisieverts per person (average worldwide). Laws stipulate that radiation doses received from nuclear power stations by local

## Chemical Substances Management

Guideline 2 We will reduce our environmental load.

### **Use of PRTR-regulated** substances

We are studying and calculating the gross emissions of controlled chemical substances in accordance with the "Law for Determination of the Release of Specified Chemical Substances into the Environment and Promotion of Improved Control" (PRTR Law).

Chubu Electric Power uses chemical substances mainly in paints, control oils for turbines used in power plants, and boiler feed-water treatment agents

We are implementing strict management of

### PRTR-regulated substance survey result FY2006

Substance Main Lise		Amount	Amount discharged Amount (kg) transporte		Amount transported	Amount ansported Substance	Main Lleo	Amount	Amount discharged (kg)		Amount	
Oubstance	Wall 030	used (t)	Atmosphere	phere Water (kg)		Gubstance		used (t)	Atmosphere	Water	(kg)	
Asbestos	Heat-retaining materials, etc.	13.3	0	0	13,330		Styrene	Contained in paints, radioactive waste fixation agent	6.2	1,800	0	4,400
Ethyl benzene	Contained in paints	14.8	14,800	0	0		Hydrazine	Boiler feedwater treatment	5.8	1.2	26.1	0
Xylene	Contained in paints	26.5	26,500	0	0		Benzene	Contained in thermal power plant fuel	2177.7	0.0	0	0
HCFC225	Dry cleaning	4.1	4,100	0	0		Trisphosphate	Turbine control oils	5.2	0	0	5,200

\* Calculations include Class 1 Designated Chemical Substances used in amounts of 1 ton or more per year at our plants (or Special Class 1 Designated Chemical Substances used in amounts of 0.5 tons or more)

### Guideline 3 We will improve our level of environmental management.

agement and Econor

Environmental Performance Guideline 2 / Guideline 3

Social Performance

### **Environmentally-friendly activities**

### **Biodiversity initiatives**

### **Greening measures**

We own about 2,300 hectares of green land, including forests and green areas on our powerplant premises.

We green our thermal and nuclear power plants with the goal of forming forested areas similar to the natural state. When we green our plant premises, we strive to create a land ecosystem. We select trees that harmonize with the local plant life, and also include food plants favored by birds and other animals.

### Giving away saplings

We donate saplings to schools, parks, and other public facilities in order to support the creation of urban and suburban environments rich in greenery. As of the end of fiscal year 2006, we have donated a cumulative total of about 317,000 saplings.

The Kariya Sales Office of our Okazaki Branch cooperated with local Sakuno Elementary School as part of the Green School Initiative to help create schools surrounded by trees and plants. The Kariya Sales Office donated 60 seedlings of rhododendron indicum and planted them at the school's entrance together with students.

Transplantation of zosteraceae seedlings

### Nature Regeneration Technologies based on Creation of Submarine Forest

A habitat of seaweed is called a "submarine forest." Submarine forests not only provide places for fish and shellfish to live and reproduce in, but also help clean the marine environment. In recent years, however, submarine forests are decreasing due to seawater damage and various other forms of marine pollution.

Chubu Electric Power has developed a technology to produce seaweed seedlings of the Eisenia bicyclis family. This technology is being used to create a submarine forest around Chubu International Airport.

In addition, we have been participating in a joint research project called "Creation of New Home Ocean" since FY2003. Collaborating with the participating communities in Mie Prefecture, we are working to create a zosteraceae forest. The results obtained so far have confirmed stabilization and growth of seedlings as well as the effect of creating a habitat for marine life.

### **Consideration for Scenery**

In order to create a harmonious balance with the surrounding environment, the musical score of Mozart's Symphony No.40 in G minor is featured on the exterior walls of the main building housing Shin-Nagoya Thermal Power Station Group No.8 and the existing Group No.7 building.



Main building of Shin-Nagoya Thermal Power Station Group No.8

In order for corporations to be committed to conserving the environment, it is critical to promote environmental management.

We have worked continuously to introduce such an environmental management system, and we work to promote the principles of environmental management through various mechanisms and programs, including education for employees and the community, and green procurement methods. We will press on with the aim of raising our level of environmental contribution still further.

### **Environmental Management System**

### Implementation of environmental management system (EMS)

Since establishing environmental management rules in January 1998, we have worked steadily to set up an environmental management system, or EMS, at each of our business premises. As a result, around 97% of our facilities had implemented EMS as of the end of FY2006, and some had been certified under ISO 14001.

### Facilities with ISO 14001 certification (As of the end of FY2006)

ead office	Chita/Chita No.2 Thermal Power Station     Hamaoka Nuclear Power Station     Engineering Technology Center     Research & Development Divisio
gional offices	<ul> <li>14 facilities supervised by Shizuc Regional Office</li> <li>14 facilities supervised by Nagar Regional Office</li> <li>13 facilities supervised by Okaza Regional Office</li> </ul>

### Internal EMS certification system

Since fiscal year 1999, we have implemented an internal certification system for company-wide deployment of EMS. Techno Chubu Company Ltd., a subsidiary of Chubu, carries out examinations on par with examination and registration institutions.

### Creation of the ECONP logo

In July 2005, we created an environmental logo, "ECONP," to promote Group-wide environmental management and use it to build an environmental brand. This logo is used at the business facilities of Chubu and our Group companies that have obtained ISO 14001 environmental management system certification.



The name "ECONP" comes from the English word "eco," the abbreviation of ecology, and the Japanese word "onpu," meaning musical notation.

Internal EMS certification system Express desire 2 Report on fiscal year to be assessed Power stations, busine premises and facilities legional Offices, etc assessmen Affairs Dent plan Create and operate Coordinate assessment plans System Judge assessment results supervision environmental management Internal certification systems Issue certification document 4 Request assessment implementation 6 Report assessment results Implement 5 Implement assessment 3 Sign a contract agreement assessment for assessment services

Students of Sakuno Elementary School planting trees

### Guideline 3 We will improve our level of environmental management.

Environmental Performance

Social Performar

### Research on quantitative assessments of environmental management activities

Since FY2003, we have been researching methods to quantitatively and comprehensively evaluate the environmental impact generated from our business activities as well as the effects of our environmental management and conservation activities.

By the end of FY2005, these research programs made it possible to utilize a Japanese version of the Life-cycle Impact Assessment Method – based on Endpoint Modeling (LIME) – to calculate the environmental impact generated by our business activities as an environmental impact index per unit of electricity sold. We have also developed a method to quantify the effects of environmental management and conservation activities, enabling us to calculate an environmental contribution index per unit of electricity sold. In FY2006, the above results were presented at a conference on Life Cycle Assessment (LCA) hosted by the Institute of Life Cycle Assessment, Japan. We would like to thank Professor Inaba of the University of Tokyo and Associate Professor Sakagami of Nihon Fukushi University for their dedication and leadership in driving these research projects.

### **Green Procurement**

In fiscal year 2003, we inaugurated our green procurement system to further the recycling promotion efforts made by our company and other companies involved in our business activities. In fiscal year 2006, we also took CSR into consideration when procuring our supplies.

## Green procurement of office supplies

Evaluation of survey results on the status of environmental management among business partners



In fiscal year 2006, our green procurement ratio was 94%. We are now aiming to raise our employees' environmental awareness further, and achieve a green procurement ratio of 100% for office supplies.

### Green procurement of electric-power equipment and materials

To reduce the environmental impact of our electric-power equipment and materials, we are working with our business partners to implement a comprehensive set of programs. Specifically, we are evaluating equipment and materials using criteria such as energy efficiency, resource efficiency, recyclability and toxicity to promote purchases of items such as plastic control cables not containing lead, removable heat-reserving materials, and non-toxic paint. As part of our efforts, since FY2005, we have been soliciting "green product proposals" from our business partners; i.e. proposals for the use of environmentally friendly electric-power equipment and materials.

### Environmental management among our business partners

We have been conducting a survey among our business partners to determine the status of their environmental management. This will allow us to gain a clear understanding of the progress they have achieved in the environmental arena, and thereby improve the total level of environmental commitment by all companies involved in the various business activities of Chubu Electric Power. Each business partner is evaluated on the status of its environmental management using our unique evaluation method (companies are classified into three levels: A, B and C).

### **Environmental Education**

In principle, we offer environmental education to our employees through on-the-job training on a daily basis. This is supplemented with instruction from environmental education trainers, environmental education programs for newly hired employees, and an e-learning program offered to all employees through e-learning. In addition, each division has its own environmental education programs as part of its specialized training.

## Environmental education trainer system

Under the system, our Environmental Affairs Department holds seminars for environmental education trainers who are selected at each business facility. These trainers apply the knowledge gained through the seminars toward educating the employees at their business facility about the environment.

This system was established in fiscal year 1998. A cumulative total of 2,144 trainers have attended the seminars thus far, and are capitalizing on the environmental knowledge obtained in their own work and in guidance of the employees under their supervision.

## Environmental education through e-learning

In fiscal year 2002, we began an environmental education e-learning program for all employees. In fiscal year 2006, the program attracted the participation of 95% of all employees.

### Chubu Eco Points program

We are implementing the Chubu Eco Points program to encourage independent, environmentally aware actions by the employees of all Group companies as well as their families. Under the program, employees receive points for the environmental activities they engage in at work, in their communities, and with their families. Activities may range from everyday matters such as not idling their car engines when parked, and taking their own shopping bags with them to supermarkets, to broader-scale activities such as community cleanup projects and receiving official certifications for environmentrelated expertise and skills. Over 3,500 employees have participated in the program through the end of fiscal year 2006. Activity results are tabulated every six months, and employees and business facilities that have accumulated the highest points are acknowledged. The Chubu Eco Points program also encompasses social contribution projects organized and run in collaboration with NPOs and other environmental bodies. In FY2006, we collaborated with the Chubu Environment Partnership Office under the Ministry of the Environment and distributed 1,000 environmental test kits incorporating



Children conduct an experiment – using the environment test kits that we gave away – at Kawaranbe, a general learning center in the Tenryu River region (lida City, Nagano Prefecture).

### Environmental education system

Circulash to children.



Environmental Performance iuideline 3

### **Initiatives by our Group Companies**

The Chubu Electric Power Group engages in the comprehensive energy service business, as well as in the IT and environmental and social service businesses. We are promoting environmental management in all our business activities through concerted Group-wide efforts in keeping with the principal message of the Chubu Electric Power Group Environmental Declaration.

### **Chubu Electric Power Group Environmental Measures** Committee

In fiscal year 2006, the Chubu Electric Power Group Environmental Measures Committee gathered in May and November and established the environmental activity guidelines for the Chubu Electric Power Group, examined common targets to be attained by all Group companies, and organized seminars on environment-related topics. (As of the end of fiscal year 2006, 34 companies including Chubu Electric Power, are sending representatives to the Committee.)



An environmental seminar organized by the Chubu Electric Power Group Environmental Measures Committee

### Increase in the level of environmental management

### Environmental management system

All of our Group companies are actively engaged in various efforts to reach the goal of a 100% rate of EMS implementation within the Chubu Electric Power Group by FY2008. In May 2006, we established EMS standards within the Chubu Electric Power Group (encompassing ISO 14001, environmental activity evaluation programs, etc.) that can be implemented easily in incremental stages by small and medium-sized companies traditionally

faced with barriers in implementing EMS. Under the new EMS standard, 19 companies have introduced their own EMS. As a result, 32 of our Group companies had set up an EMS as of the end of fiscal year 2006 (implementation rate: 94%) and are working to practice thorough environmental management. In February 2007, we also organized an EMS workshop to assist Group companies in establishing an EMS and operating the system effectively.

### **Environmental education**

To raise the environmental awareness of their employees, all our Group companies are actively organizing environmental education programs reflecting the current situation and needs of each company, to raise the environmental awareness of their employees. We also provided e-learning and other environmental educational materials to our Group companies over our Group intranet. and distributed educational textbooks. In addition, we dispatched employees as instructors for environmental training courses held by Group companies.

As a result, the number of Group companies implementing environmental education increased to 33 in fiscal year 2006 (implementation rate: 97%).

### Initiatives by **Group companies**

### **TOENEC CORPORATION**

TOENEC CORPORATION is a general facility solution provider utilizing its expertise and know-how to develop control systems for energy-conservation production equipment and related machinery, and combining system hardware and software to propose energyconservation solutions. TOENEC's contribution to the promotion of

energy conservation through these solutions received high recognition, and the company received an award for excellence at the 2007 Aichi Environmental Awards (organized by Aichi Prefecture).

### LNG Chubu Corporation

LNG Chubu Corporation sells some of the LNG imported by Chubu Electric Power for use in power generation, and transports LNG using tank trucks. LNG is a form of energy that does not

### **Environmental load of Group companies**

(in FY2006, for 33 of our Group companies ting Chubu Electric Po

		A second s
Items		FY2006
Electricity	Offices	76.01 GWh
utilization	Plants	125.31 GWh
Water utilization		Tap water: 620,000 m <sup>3</sup> Industrial water: 110,000 m <sup>3</sup>
Vehicle fuel utilization		Gasoline: 5,600 kl Diesel: 2,600 kl
Euclutilization	Petroleum	2,800 kl
Fuer utilization	Gas	17.40 million m <sup>3</sup>

generate SOx and soot dust when burned, and generates lower CO2 emissions than petroleum or other carbon-based fuels. Hokuriku Erunesu Co., Ltd., established by Chubu Electric Power with three other partners including Hokuriku Electric Power Company, is also engaged in the sale of LNG throughout Hokuriku region. The combined sales volume of LNG by LNG Chubu and Hokuriku Erunesu amounted to approximately 70,000 tons in FY2006.

We began collecting data on the environmental load of all Group companies in fiscal year 2002. Each company is striving to reduce environmental loads based on its own target. In FY2006, there was no violation of any environmental law or ordinance.

Items	FY2006
Industrial waste	Amount generated: 45,000 tons Amount recycled: 36,000 tons
Waste paper	Amount generated: 1,462 tons Amount recycled: 1,167 tons
SOx emissions	4.3 tons
NOx emissions	39.0 tons
CO <sub>2</sub> emissions*	150,000 tons-CO2
	Items Industrial waste Waste paper SOx emissions NOx emissions CO2 emissions*

### \* Calculated based on electricity utilization, vehicle fuel utilization, and fuel utilizatio

### **PRTR** (actual)

	Main application	FY2005			FY2006			
Substance		Amount handled (t)	Emissions (kg)	Amount transported (kg)	Amount handled (t)	Emissions (kg)	Amount transported (kg)	
Halon 1301	Thermal medium for cryogenic power generation	9.1	9,100	0	4.2	4,200	0	
HCFC 225	Product washing	1.7	1,700	0	1.5	1,500	0	
Toluene		10.6	9,900	700	11.8	11,000	770	
Ethylene glycol monoethyl ether	Contained in paint	1.8	180	1,600	1.5	140	1,400	
Xylene	Contained in paint	4.8	3,500	1,300	5.9	4,200	1,700	
Styrene		1.3	190	1,100	0	0	0	

### Environmental preservation costs of our Group companies

Category		Major itomo	Expenditures (millions of yen)			
		Wajor items	FY2005	FY2006		
Resource		Reduction and recycling	111	136		
cycle	waste measures	Disposal and treatment	507	877		
Management	Organizational measures	Personnel expenses for environmental preservation organizations and environmental training	442	470		
activities Certification acquisition and maintenance		Acquisition and maintenance of ISO 14001, and others	57	71		
Social activities	Social activities Greening and nature conservation Greening and nature conservation		91	96		
Total			1,207	1,650		
	Average environmental preser	35	50			

Note: Totals may not match because figures have been rounded down to the nearest 100 million yen.

We calculated environmental preservation costs (amount of expenditures) of our Group companies.

### Guideline 4 We will advance environment-related communication and

Management and Ec Performance

Environmental Performance Guideline 4

Social Performan

We are working hard to ensure that the public understands and trusts our environmental efforts through active information disclosure and interactive communication. We need to cooperate with the local community as well as countries worldwide in order to address global environmental issues. We therefore strive to promote cooperation with local communities, and actively pursue information exchange and overseas technological collaboration with energyand environment-related research institutions.

Sample content of our website

Eco Life Club

Café

Eco Land

Yuna's Happy

Eco Life

Hinemosu

### **Environmental Communication**

### Chuden Elementary School Eco Session

In December 2006, we organized the Chuden Elementary School Eco Session 2006 to provide an opportunity for elementary school children – who will become society's future leaders – to learn about the environment and energy. The event saw the participation of 268 students from six elementary schools in the Chubu area, who had attended preparatory programs conducted by our employee instructors at schools or during power station tours. The participating children presented the results of their projects under the theme of "What we can do for the future of the Earth." After the session, the students representing each school had talks regarding the environment with President Mita of Chubu Electric Power and astronaut Toyohiro Akiyama.

### Communication utilizing the Chubu Electric Power website

We are utilizing our website to provide information and promote dialogue on the environment.

P Lifestyle Information Site [link chuden] https://link.chuden.jp/

live an eco-friendly life.

the environment

enjoyable, game-based setting.

Provide various tips on everyday activities to help you

Children can learn about environmental issues in an

A web drama where the main character encounters and

learns about energy conservation, recycling and various

Provide fashion and lifestyle tips on living in harmony with

other everyday issues regarding the environment

We actively provide useful information on how consumers can practice an eco-friendly lifestyle at home, such as keeping an environmental household account book and various other ideas to "live green."



Children talk about the environment with President Mita (right) at Chuden Elementary School Session.

# Backyard tour We conducted "backyard tours" during which

participants had the opportunity to view our facilities and learn about our environmental efforts. The latest backyard tours, on the theme "effective utilization of water resources through hydropower generation and environmental conservation efforts by Chubu Electric Power," primarily consisted of tours of our Kamo Power Supply Control Center and Kawabe Hydropower Generation Station. After completing each tour, we held a discussion session with the participants.

### Environmental excursion tour in Nagoya Port

**Eco-Industrial Trade Fair** 

We held an exhibition at the Messe Nagoya 2006

Eco-Industrial Trade Fair in October 2006. Our booth showcased a range of our

environmental technologies relating to the

creation of submarine forests (seaweed), the

effective utilization of coal ash, compensation

systems for momentary voltage drops utilizing

electrolytic double-layer capacitors, and CFC

presented and demonstrated solutions meeting

breakdown & treatment systems. We also

the diverse needs of customers.

During the Environment Awareness Month of June 2006, we held an environmental excursion tour around Nagoya Port, where the participants (45 families consisting of 104 parents and children) were guided by the skipper, actor Ken Nakamoto. The families boarded a cruise boat at Nagoya Port Wildflower Garden Bluebonnet and enjoyed an excursion around the port, visited our power station, and learned about nature and life through the picture story show presented by Nakamoto. The event provided a valuable experience for the parents and children, who learned the importance of nature and electricity.

### Environment and energy seminar

**Environmental Performance** 

The seminar provides an opportunity for us to exchange opinions on a broad range of environmental issues with young, future leaders of society. In FY2006, we organized eight seminars and discussed topics on the environment and energy with 10 university and graduate school students in Aichi Prefecture.



Backyard tour



Environmental excursion tour in Nagoya Port

### anagement and Eco erformance

Environmental Performance Guideline 4

Social Performance

### **Cooperation with the Local Community**

### "Invitation to the Forest"

In Taiwa-cho, located in the city of Gujo in Gifu prefecture, we own a broad expanse of forest covering 11 million square meters, called Uchigatani Forest. Here, we conduct forest activities through a civic program called Invitation to the Forest. The theme of the program is "living in harmony with nature – cultivating forests and educating people." The activities provide a wide range of people with opportunities to help with forest conservation and experience nature, so that as many people as possible become actively involved in environmental conservation activities.

In fiscal year 2006, we held 32 events (with a total of 314 participants) in cooperation with groups such as Lovers of Water and Greenery, an NPO comprised mostly of current and retired Chubu Electric Power employees working as volunteers, as well as local NPOs including Friends of the Metasequoia Forest. Activities included training for the Chuden Foresters (forest volunteers; the first batch of 20 volunteers completing the workshop received a certification) and practical forest education classes.



Chuden Foresters receive training on tree thinning using a chainsaw.

### Collaboration with an environmental NPO

In collaboration with the Chubu Recycle Citizens' Organization, an NPO headed by Mr. Yoshiyuki Hagiwara, we have held environmental classes for elementary school students since 1999, and given away commemorative tree-planting certificates since 2001.

### **Environmental Classes**

We have held a series of three environmental classes for 36 elementary school students in Nagoya City and its vicinity, starting from October 2006. The program was designed in line with the key philosophy of ESD (UN Decade of Education for Sustainable Development) and organized in collaboration with UNY Co., Ltd. and citizen's groups. The children enjoyed learning about the importance of energy and the environment.

### **Tree-planting certificates**

As a part of the Chuden Eco-Partnership Program, we awarded tree-planting certificates to 5,000 customers chosen by lottery.

### Environmental Partnership Organizing Club

An environmental advocate group, the Environmental Partnership Organizing Club, was established in February 2002 by 14 local companies including Chubu Electric Power. The club had 308 corporate members as of the end of fiscal year 2006.

Chairman Kawaguchi of Chubu Electric Power was elected Club Chairman in FY2006. Under his leadership, we are actively participating in and collaborating with various club activities.

### Promoting more efficient energy use by customers

enhance cooperation with the community on a local and global level.

To reduce CO<sub>2</sub> emissions through energy conservation in homes, buildings and factories, we are implementing measures such as developing and recommending high-efficiency equipment for use by our customers.

## Popularizing electrical heat pump air conditioners

In our sales promotion activities focused on energy solutions, we recommend highlyefficient, environmentally-friendly electrical heat pump air conditioners. In fiscal year 2006, we received 2,264 orders corresponding to approximately 240 MW.

### Popularizing Eco Cute

Water heating accounts for about one-third of residential energy consumption. We are working

Development of energy conservation products

to expand the diffusion of Eco Cute, an electric water heater that uses a heat pump with natural coolant (CO2). Eco Cute reduces energy consumption from water heating and is also budget- and environment-friendly. The machine is very popular among our customers and approximately 53,000 units were sold in fiscal year 2006 alone. Cumulative sales since the system's launch amount to around 146,000 units. We are also implementing the Home Energy Conservation Partnership Project jointly with Nagoya City and Owari Asahi City. Backed by the New Energy and Industrial Technology Development Organization, the project subsidizes part of the initial cost of our Eco Cute and energy utilization measuring system Sho-ene Navi, and also gathers data on energyconservation effects and reductions in CO2 emissions achieved through the project.

## Energy management system for commercial facilities

We developed an energy management system for use in commercial facilities, which supports energy management by businesses operating multiple outlets, such as supermarkets and restaurants. This system can be introduced at a low cost and provides a wide range of energyconservation support functions to meet the various analysis and management needs of customers. The system is already in use by some supermarkets.

### Development of High Efficiency Heat Pump We have developed the High-F, a high-efficiency heat pump, together with Kobe Steel, Ltd., Tokyo

with Kobe Steel, Ltd., Tokyo Electric Power Co., Inc., and Kansai Electric Power Co., Inc. This air-cooled heat pump chiller boasts the highest efficiency in the industry. The system, which is used for air-conditioning heat source equipment in buildings, factories, and other facilities, and supports both cooling and heating applications, received the Chairman's Grand Prize for Energy Conservation Center for FY2006.



Distribute pamphlets such as Q&A: Skillfully Using Electricity and

· Recommend high-efficiency energy-conservation devices at

### Other energy-conservation activities

We take advantage of a wide range of opportunities to provide information about energy conservation to our customers. We ask our customers to use electricity efficiently, to help prevent global warming.

Eco Beport

exhibitions such as ENE-WAY

- Display electricity usage for the same month of the previous year on meter readings
- Offer energy-conservation consulting as part of our customer solution services
- Develop public relations via our Eco Life Club, Eco Land, and other websites

Social Performance

### **Cooperation with the World**

We are helping to improve environmental conditions in other countries through our consultation service, capitalizing on the experience and knowledge we have accumulated by implementing environmental measures at our thermal power stations. We are also actively involved in environment-related projects overseas.

## Palm husk biomass power generation project

Malaysia is the number-one producer of palm oil in the world. However, the majority of the palm husks left over from the production process are discarded as waste. This project aims to develop two small-scale power stations with an output of 10 MW, where palm husks are used as fuel for generating power. The stations are scheduled to start operation in 2008. This project not only contributes to the preservation of the regional environment, but it will certainly help us receive CO2 credits, as it has been registered as a CDM project with the United Nations.



Palm tree and husks used as fuel (left)

### Commissioning of regional electrification project in Africa

We were jointly commissioned with KRI International Corporation to consult on a regional electrification project in the Southern African country of Malawi, led by the Japan International Cooperation Agency (JICA). Under this project, which aims to promote the development and use of electricity in regions where approximately 80% of Malawi's population live, our employees will join a team of experts and provide operations management consulting regarding line extension work and technical management concerning the photovoltaic power generation system.

## Development of International Exchange

By accepting trainees from developing countries and dispatching instructors to these countries, we are promoting international exchanges in order to protect the environment, improve energy efficiency, and assure the safety of nuclear power generation.

We are also a member of the World Business Council for Sustainable Development (WBCSD), which brings together some of the world's leading environmental companies to work on various sustainable growth programs.

### Acceptance of trainees and dispatch of instructors

	Number of trainee projects	Number of instructor projects			
FY2006	15 (127)	11 (12)			

Note: Figures in parentheses indicate number of participants.

### **Chubu Electric Power Environmental Forum**

Since 1993, we have held the Chubu Electric Power Environmental Forum, which provides an opportunity for our president to hear outside experts' views on our environmental measures.

### 28th Chubu Electric Power Environmental Forum

In November 2006, we held our 28th Environmental Forum, where we heard opinions regarding our efforts in the field of PCB treatment. The forum members also toured the Insulation Oil Recycling Center (Minato-ku, Nagoya City) where insulation oils with low PCB concentrations are treated to remove toxic substances.



Tour of the Insulation Oil Recycling Center

### Views of the forum members

- It is important for Chubu Electric Power to be accountable for its PCB treatment efforts. Active disclosure of relevant information through the CSR report and other means is commendable.
- Japan's PCB treatment standards are much more stringent than those of other countries. The processing standards should be reviewed further, taking all factors into account.
- Among the various issues concerning the PCB treatment system, we should discuss more efficient treatment methods in particular.
- Obtaining a consensus from the local community is very important in driving the PCB treatment initiative. To do this, further study is needed in the area of risk communication.

### 29th Chubu Electric Power Environmental Forum

**Environmental Performance** 

We received comments on our environmental conservation activities in FY2006 at the 29th Chubu Electric Power Environmental Forum held in May 2007.

### Views of the forum members

- For mixed combustion of woody biomass, it is important to give full consideration to ensuring sustainable growth of forests.
- Eco Report 2007 should have a narrower focus by identifying its target readers.
- In the area of disclosure, relevant and useful information should be communicated to general consumers by emphasizing the additional keyword "safety" in addition to "security."
  Chuden Elementary School Eco Session is a great opportunity for children – society's future leaders – to learn about energy and the environment.

### Members of the Chubu Electric Power Environmental Forum (as of May 2007)

Nobuhiro Okuno (Chair)	Professor, Graduate School of Chukyo University
Sayuri Ozeki	Executive Director, Chubu Chapter, Nippon Association of Consumer Specialists
Foshihiro Kitada	Professor, Department of Ecological Engineering, Toyohashi University of Technology
Keiko Kunimura	Director, Nagoya City Waterside Research Group
Kazuhiro Kuno	Professor, Faculty of Engineering, Aichi Institute of Technology
Koshin Kura	Executive Director, International Center for Environmental Technology Transfer
Naomasa Shida	Vice President, Shizuoka Eiwa Gakuin University
Seiichi Shimura	Editor-in-Chief, The Chunichi Shimbun newspaper
Shinkan Tokudome	Professor, Nagoya City University Graduate School of Medical Sciences
Hiroshi Nakamura	Professor, Faculty of Education, Shinshu University
Park, Hye-Sook	Professor, Faculty of Humanities and Social Sciences, Mie University
Masanobu Hasatani	Professor, Aichi Institute of Technology
Takeshi Horishita	President, Aichi Prefectural Council on Laborers' Social Welfare
Eri Mizuo	Associate Professor, Faculty of Human Studies, Meijo University
chiro Yamamoto (Vice Chair)	Professor, Graduate School of Engineering, Nagoya University

### Customers

Social Performance

## Aiming at improving customer satisfaction

We are intensifying a wide range of initiatives aimed at offering services that achieve customer satisfaction (CS). Our drive to ensure customer satisfaction is focused on:

- Care (Improving how customers view our service and response)
- Accuracy (Accurately handling matters)
   Speed (Acting quickly to respond to customer's needs)

As a part of our CS drive, we set up dedicated customer satisfaction sections at our head office and regional offices to support the front line activities where we deal with customers directly. At sales offices where sales representatives are engaged in various activities requiring direct contact with customers, the sales office manager acts as CS manager and works with the CS leaders he/she has appointed to promote independent programs developed by the specific sales offices.

### Utilizing our Customer Response System

We share the valuable feedback received from our customers with all employees, utilizing our Customer Response System. The feedback from customers received through the customer service representatives at sales offices, over the phone and through other means of communication are registered in the system. The stored information can be utilized by all employees, so that valuable comments and requests that can help us improve our services can be shared throughout the Company. The feedback is examined in detail at crossdivisional discussion meetings and by division representatives. The results of our studies are swiftly reflected by further improvement of our business processes and services.

### Conducting Customer Feedback Surveys

In addition to our Customer Response System, we conduct ongoing surveys asking customers questions such as what they expect from Chubu Electric Power, and their impressions of our company.

The questionnaires, which target about 1,000 customers living in our service area, ask customers to give their views of Chubu Electric Power, and their opinions and requests regarding electricity bills and all-electric homes. In our survey conducted in September 2006, 73% of respondents said they wanted us to lower our electric bills, 40% said they wanted speedy recovery from accidents and disasters, and 25% said they wanted to see our active commitment to the global environment, especially the reduction of CO2.

We carefully analyze the results of these surveys with the help of outside experts, and reflect our findings in our sales activities on a companywide basis.

### Customer Response System



### Reinforcing communication with customers by providing helpful information

A cross-divisional discussion and examination is underway on the specifics of a new campaign to take our personalized service to the next level, so as to ensure that the different needs of each customer are met more effectively and precisely. The slogan of this campaign is "Enriching the experience of customers." Under this campaign, we will enhance our services through existing communication

channels with customers, and also set up a new lifestyle website providing content the customers will find useful. With these measures, we will expand our communication with customers.

### Protecting our customers' privacy

As a company whose mission is public service, we have a vital responsibility to appropriately handle and protect personal information. We have taken a variety of steps to ensure compliance with the Personal Information Protection Law, such as establishing a personal information privacy policy, creating a privacyprotection regime and internal regulations, and educating all employees on privacy issues.

### HP > Handling of personal information



## Establishment of management system and employee education

Under the leadership of the Privacy Manager appointed by our president, the privacy promotion section and management coordinators in divisions, branches, plants and other company facilities are working together to manage information, using a single, company-wide framework. We are also providing informative content in the company newsletter and intranet, organizing e-learning seminars, requiring employees to carry an information management pocketbook that specifies the key points of our internal rules on handling personal information, and implementing employee education programs. All our Group companies have also specified their own internal rules on personal information and share the details of incidents involving information leaks experienced by Group companies and other companies. These are just a few examples of how we are striving to ensure appropriate management of personal information.

## Preventing personal information leaks and their re-occurrence

Regrettably, in fiscal year 2006 there were four cases in which personal information was lost or stolen from our company. We immediately apologized to the customers concerned and explained the situation. We also made announcements to the press in order to prevent the damage from spreading. We are also committed to appropriately managing personal information by making all employees aware of the specific situations at hand.

Society

Performance

Social

### Shareholders and Investors

### **Local Communities**

Social Performance

Management and Eco Performance

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Social Performance Shareholders and Investors

We are working to maintain and increase profit through efficient management and effective investment. We are committed to ensuring a high level of transparency, and to enhancing two-way communication with our shareholders and investors, by appropriately and promptly disclosing information on our management/investment efforts through investor relations (IR) activities<sup>+1</sup>.

## Communication with our shareholders and investors

We maintain a dialogue with our shareholders and investors by holding quarterly financial briefings and having our managers individually visit shareholders and investors both in Japan and abroad.

In order to increase public awareness of our business activities, we also provide tours of our power stations and other facilities, and specially tailored company orientations targeting individual investors, women, and other specific groups.

We not only disclose our management and financial information on our website, but also accept inquiries from shareholders and investors via email.

### \*2 IR tools: Our IR tools include an annual report summarizing the management and financial condition of the company, and the Investor's Data Book, a compilation of chronological business and financial data.

\*1 IR (Investor Relations)

activities: IR activities are

aimed at providing prompt

and unbiased information

regarding a company to its

shareholders and investors,

so that these shareholders

and investors can use the

information to make

investment decisions.

\*3 SRI (Socially Responsible Investment): SRI is an investment method that takes into account a company's approach to social responsibilities – including addressing environmental issues – as well as the company's financial evaluation.

### **Disclosing information**

We disclose information in accordance with the Securities and Exchange Law and other relevant regulations and ordinances, and the rules for timely disclosure stipulated by the stock exchanges where we are listed. We also actively publish information that we deem will be useful to our shareholders and investors via a wide range of IR tools\*<sup>2</sup>, including our website.

### Evaluation by SRI\*3 rating agency

Our stock is one of the 150 stocks added to the Morningstar Socially Responsible Investment index (MS-SRI), a socially responsible investment (SRI) index by Morningstar Japan K.K.

### Raising awareness among top management of Group companies

Organization of executive CSR seminar

### Environmental Management from the Viewpoint of SRI Investors [Seminar]

In December 2006, we held an executive CSR seminar for about 300 of our highlevel managers, including management executives and top management from our Group companies, to raise their awareness of CSR.

We invited Mizue Tsukushi, President of The Good Bankers Co., Ltd., to talk about the future of environmental management at corporations from the viewpoint of SRI investors.

Ms. Tsukushi, who is the creator of "Eco Fund" — Japan's first SRI financial product — said that the SRI fund market is expanding in Japan. "The key lies in how companies explain and provide information about their efforts to the market. Electric power companies in Japan should do more to show to the world how they are tackling environmental issues by utilizing their advanced technologies," said Ms. Tsukushi. The seminar was broadcast to all offices and stations across Japan through our internal TV network, and the employees listened to the speech with great interest to gain valuable insights.



### President Tsukushi talks about the viewpoints of SRI investors

As a company whose businesses are firmly rooted in the Chubu region of Japan, Chubu Electric Power emphasizes communication with all the local communities in the Chubu region, aiming to ensure mutual understanding. We are engaged in a wide range of initiatives that benefit the people of the region, and have also been expanding the sphere of our activities to other countries in recent years.

### Contribution to Society – Helping keep the community safe and secure

### Gardening welfare initiatives using Bluebonnet

## Gardening welfare to promote community-building

We are promoting welfare initiatives through gardening. As a part of these efforts, we opened a part of the green area at our Shin-Nagoya Thermal Power Station to the public as the Nagoya Port Wildflower Garden, also known by the nickname Bluebonnet. Our gardening welfare activities are designed to harness the power of flowers and greenery to alleviate stress, thereby contributing to more widespread health and wellbeing.

In fiscal year 2006, we organized a number of events at the Bluebonnet for senior citizens and the handicapped, including flower arrangement seminars for visitors from social welfare centers, and handicraft seminars using pressed flowers for the mentally challenged. We also collaborated with NPOs, and other bodies to organize symposiums, friendship events and other programs to further promote the spirit of gardening welfare.

In recent years, local governments have also introduced the concept of gardening welfare as means of community-building. We are lending a hand in the planning and execution of these programs. One specific initiative worth mentioning is our participation in the launch of the Forum for Building Green, Healthy Communities, an NPO aimed at promoting the concept of gardening welfare through the organization of seminars, including training seminars for gardening welfare professionals who act as event coordinators, and also at supporting community building drives through gardening welfare activities. This NPO also enjoys the participation of local governments and bodies, corporations, universities and other entities that work together to support the Forum's mission. We will work further to expand the circle of gardening welfare activities.

URL http://www.wfg-bluebonnet.com/

Nagoya Port Wildflower Garden Bluebonnet 42 Shiomi-cho, Minato-ku, Nagoya City Phone: +81-52-613-1187



Flower arrangement seminar hosted at Bluebonnet for seniors visiting from social welfare centers.

### **Local Communities**

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Local Communities

## Support for international volunteer programs

### Helping children with cleft lip/palate

Cleft lips or palettes are congenital deformities that occur in one in every 500 babies born. In Japan, babies born with cleft lip/palate can receive corrective surgery to reduce the exterior deformity. However, in developing countries where surgeons and medical facilities capable of remedying the condition are still limited and the corrective surgery itself is expensive for a majority of citizens, many children are unable to receive proper treatment.

To provide assistance to children with cleft lip/palate, as well as their families, in January 1992 the Japanese Cleft Palate Foundation was established in Nagoya through a collaborative



effort of oral and maxillofacial surgeons at the Dentistry Department of Aichi Gakuin University, as well as other medical professionals and supporting corporations. Chubu Electric Power has been cooperating with the Foundation since its establishment, and Chairman Kawaguchi has been serving as President of the Foundation since 2005. The Foundation began sending

Overseas surgery team in Vietnam (Foundation President The Foundation And The Foundation And The Foundation And The Foundation President The Found

surgery team consists of a group of doctors from Aichi Gakuin University, as well as other volunteer doctors and students. The Foundation has sent surgery teams to Mongolia, Vietnam, and Indonesia, among other countries, and provided free surgery for around 3,000 patients so far. Many of the cured children and their families have expressed their sense of gratitude and appreciation in return. In addition to the correction of lip/palate cleft in children, the Foundation is also engaged in a wide range of other volunteer programs, including free dental treatment, technical guidance for local medical professionals, and donation of medical equipment. These activities by the Foundation have been

surgery teams overseas regularly in 1993 as a

part of an international volunteer program. Each

recognized around the world. In 2000, the Foundation received the Welfare Minister's Award from Mongolia and the Order of Humanitarian Assistance from the Socialist Republic of Vietnam. In 2006, the Foundation received the coveted Public Health Award in Japan, which is sponsored by a leading life insurance company and given to an organization that has made a contribution to the improvement of public health. These recognitions are proof of the far-reaching, important medical contributions the Foundation has made in the global community.

URL http://www.aichi-gakuin.ac.jp/~jcpf Japanese Cleft Palate Foundation, a designated non-profit organization

### Support for raising children with developmental disorders Collaboration with the Asperger Society Japan

Chubu Electric Power is working with the Asperger Society Japan, a designated non-profit organization (NPO), to promote joint projects aimed at supporting children with developmental disorders and other problems that create childrearing difficulties. The Society provides a wide range of support to children/adolescents with developmental disorders to help them live an independent life, by offering assistance to the children themselves and their families. The specific activities in which Chubu Electric Power is involved include featuring articles on supporting developmentally challenged children in Enchante, a life information newsletter published by Chubu Electric Power, and also in the cultural magazine Koryu. We offer the premises of our sales offices for various events, such as family cooking classes and recreational activities, and invite interested families to join. These events provide valuable opportunities for the affected children and families to exchange information with others in similar situations.

### Establishment of AED

## Contributing to the health of community members

We have an AED (Automated External Defibrillator) set up in each business location to assist our employees, customers and community members in the event of a health emergency. Instructions for use are posted on the intranet and AED seminars are conducted in rotation to make sure employees will know how to use the device when necessary. We are also building an environment where the AED can be quickly put into operation should emergency medical aid become necessary.



Employees of Nakatsugawa Sales Office receive instructions on emergency life-saving techniques.

### • Initiatives by our Group Companies

### Donation of crime-watch patrol vehicles EIRAKU AUTO SERVICE Co., Ltd.

EIRAKU AUTO SERVICE, a member of the Chubu Electric Power Group, provides a car rental service that helps companies improve their efficiency and allows individuals to enjoy driving. In June 2006, EIRAKU AUTO SERVICE donated three vehicles to a conference of local school districts to cooperate in the effort to build a better community. These vehicles are used as patrol vehicles by the crime-watch patrol teams in each school district to conduct safety patrols for school children and the community at large.

http://www.eiraku-car.co.jp/ (Website of EIRAKU AUTO SERVICE)



### School parents' network, Kizuna Net

Since December 2005, we are offering a service called Kizuna Net. This service makes it easy to send email to the mobile phones of parents and guardians of students in kindergarten, as well as students in elementary school and junior high school, and other children. Thanks to this service, schools can contact registered parents quickly by sending urgent information, such as notices that their children are leaving school earlier upon the issuance of a heavy-rain or other warning.

### Providing localized mobile information services with Poketchu!

Since 2005, we have been operating an accident and crime information service called Patonet Aichi (Patrol Net Aichi) jointly with the Aichi Prefecture Police Department. The number of registered users exceeded 40,000 as of the end of fiscal year 2006. This service contributes to community safety by alerting residents to incidences of crime.

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Social Performance

### **Supporting the Leaders of Tomorrow**

## Sponsorship of science information program

To help children realize the fun of science, we are sponsoring "Denjiro's Sunday Experiment Laboratory, Love Labol," a science information program broadcast on Chukyo TV, as a "traveling classroom" utilizing TV media. Science producer Denjiro Yonemura conducts funfilled experiments to reveal the mysteries of science. The future of a community depends on its children. At Chubu Electric Power, we provide a wide range of education and support programs to make children interested in environmental and energy issues. We will continue to work with younger generations to ensure a bright future for corporations and society.

### Traveling classroom

In response to requests from elementary and junior high schools, we send our employees to schools to hold classes devoted to electricity experiments, the environment, and energy.

• Number of classes: 647 for 24,238 students (actual, FY2006)



Scene from a traveling classroom. An instructor observes children working seriously on their project.

### Tours of workplaces and facilities

In response to requests from elementary and junior high schools, we conduct tours of sales offices, power stations, and other facilities. • Number of tours: 284 for 4.581 students

(actual, FY2006)

We have exhibition facilities where children can enjoy learning about the environment, energy, and science. These facilities are open to all community members.

> Learn More about Electricity
 > Guide to PR Exhibition Facilities

### Electric Kids Series (wall posters)

Since the company was founded in 1951, we have issued "Electric Kids Series" wall posters that focus on the hows and whys of science to help instill children with a scientific curiosity. Each year, we deliver 10 different posters to about 3,300 locations in our service area, including elementary schools and libraries.



### Activities of the Chubu Educational Advancement Foundation

The Chubu Educational Advancement Foundation was established with the aim of promoting elementary and junior high school education. The Foundation helps children develop their creativity through a wide range of educational programs, and also conducts art and culture programs that cultivate imagination and empathy in children.

Activities of the Chubu Educational Advancement Foundation

### **Contribution to Community Culture**

As a corporation maintaining close ties with the community where it operates, Chubu Electric Power aspires to contribute to the transmission of traditional culture and art, as well as the creation of new cultural movements. We will assist our community in further developing its culture and tradition, which are common assets shared by all citizens, so that the community will become richer and more vibrant.

### Sponsorship of joint concert by Nagoya Philharmonic Orchestra and high school brass bands

We organized a joint concert by Nagoya Philharmonic Orchestra and high school students as a part of our effort to support the music activities of high school students who will lead



Joint concert by Nagoya Philharmonic Orchestra and high school students

### Activities of employee volunteer organization "Fairy Lights Club\*1"

The "Fairy Lights Club" was organized in 1991 as a part of our social contribution activities, and is open to all employees. The "Fairy Lights Club" was named after its founding philosophy of promoting understanding and compassionate collaboration among employees by connecting the good intentions of each individual (a single light) to create a large circle of goodwill (bright illumination). It provides information on volunteer programs to encourage participation by other employees.

Since its organization, the members of the Club

the cultural development of tomorrow's Japan. In March 2007, 40 brass band members from four high schools in Aichi Prefecture finally realized their dream, after many months of practice, of giving a joint concert with Nagoya Philharmonic Orchestra members to an audience of around 2,000 at the Century Hall in the Nagoya Congress Center. This is the eighth such event sponsored by Chubu Electric Power. The joint concert program provides great opportunities for high school musicians to receive instructions directly from Nagoya Philharmonic Orchestra members during joint practice sessions.

### Support for Nagoya Student Film Festival

We are supporting the Nagoya Student Film Festival, organized by local university students in the Nagoya area, to help showcase the creativity and inspiration of local youths to the nation. This film festival features screening of a variety of movies and short films produced by the members of film circles at eight universities. The latest festival was held over two days in March 2007, and around 370 visitors enjoyed watching 25 movies.

have performed volunteer work in areas affected

locations as well as at public facilities. The scope

In fiscal year 2006, the Club carried out clean-up

campaigns around our offices and stations, and

in August it participated in the removal of earth

Prefecture that had been hit by torrential rains.

of the Club's activities is growing, along with an

by disasters and taken part in clean-up

campaigns in the vicinity of our business

increase in the number of participants.

and sand in parts of Okava City, Nagano

\*\* "Fairy Lights Club": The Club was named after its lounding philosophy, of promoting understanding and compassionate collaboration among employees by connecting the good intentions of each individual (a single light) to create a large circle of goodwill (bright illumination).

### **Business Partners**

Management and Eco Performance Environmental Perform

Social Performance

We are committed to building a solid foundation of trust with our business partners through communication as well as fair and honest dealings, and carrying out CSR procurement activities in partnership with our business partners.



We have a basic procurement policy that specifies total compliance, safety assurance, and mitigation of environmental burden, in line with our CSR mission. All our procurement activities are carried out in accordance with this policy.

Presentation to business partners (April 2007)

### **Basic Procurement Policy**

### 1. Total Compliance

- We perform our work duties in strict compliance with all laws, rules and corporate ethics.
- We practice respect for human rights (prohibit child labor and forced or compulsory labor, avoid discrimination, etc.), carefully manage personal and confidential information, protect intellectual property rights, and so on.
- 2. Safety Assurance
- Understanding that safety takes priority over all else, we endeavor to prevent occupational accidents and injuries and ensure public health and safety.
- 3. Mitigate Environmental Burden
- Cooperating with our suppliers, we work to mitigate environmental burden by practicing green procurement, among other measures, and help establish a recycling society.
- 4. Open Door Policy
- We provide access to both Japanese and foreign companies, based on our open door policy, so that we may do business with suppliers with superior technical expertise who can provide quality products and satisfactory service.
- 5. Fair and Honest Procurement
- We conduct fair and honest business transactions for the procurement of materials, equipment and so on, basing our decisions on economic rationality while assessing each supplier comprehensively for its prices, product quality, performance, safety, ability to meet delivery and construction deadlines, after-sale service, technical expertise, production capacity, business administration, safety management system and stance on corporate social responsibility (CSR), among others.

### 6. Work in Partnership

- At Chubu Electric Power, we regard each of our suppliers as an important partner with whom we seek mutual growth.
- Through open communication and fair and sincere transactions with our partner suppliers, we form stronger trust-based relationships and seek to cooperate with our suppliers to contribute to the sustainable development of society.

## In partnership with our business partners

We hold our business partners in high regard and recognize that they aim to develop and grow together with us. We are also committed to fostering a relationship of trust with our business partners, strengthening our partnerships, and collaboratively fulfilling our corporate social responsibility.

We are asking all of our business partners to understand our basic procurement policy and practice the following six items:

### What we ask of our partners

- 1. Total Compliance
- 2. Safety Assurance
- 3. Mitigation of Environmental Burden
- 4. Cost-Cutting Endeavors
- Maintained High Quality Level of Service
   Work in Partnership
- In fiscal year 2006, we conducted a survey on the status of CSR activities by our business partners. Starting from fiscal year 2007, we are also organizing a presentation to business partners to explain key information regarding our management plan and material procurement activities. The first presentation was attended by 300 representatives from around 180 companies. We have established a point of contact in our head-office procurement division. Using this link, business partners can consult with us on parts and materials transactions in general. The aim of this point of contact is to enhance communication with our partners. Please see the section entitled "Procurement" on our website for details.

P > Corporate Information > Procurement

We employ a diversity of people to promote equal opportunity and also because we recognize individual capability and aptitude. We also strive to create a corporate culture that enables each of our employees to fully exercise his or her skills. We have built an employment system aimed at maintaining an optimal balance between work and home, and between work and the community. We offer support so that each employee can work safely and in good health.

### Respect for human rights and equal opportunity

### **Respect for human rights**

**Employees** 

We are working to create a workplace where each employee can work with enthusiasm and satisfaction, taking into account the rights of individuals and respect for diversity. To this end, we put in place the Individual Rights Awareness Promotion Committee, and published our CSR Declaration and Eight Action Guidelines on Compliance, to spell out our commitment to respecting the rights and dignity of our employees as individuals. Active programs are being implemented to ingrain the concept of individual rights in our staff.

As a part of our initiative to raise awareness of the importance of individual rights, we provide in-house training on such rights issues as social discrimination on the basis of ancestry (caste), handicaps, race, ethnicity, gender, and so on to promote understanding and awareness among our employees on these issues. We are also promoting awareness programs to coincide with Gender Equality Week, Human Rights Week, and other key national and international drives on the rights of the individual, and by actively sending our employees to participate in external seminars on rights issues.

### Establishment of a point of contact

We have set up the Personnel Consultation Office as a point of contact for employees on various issues regarding personnel matters, including questions they might have about the activities we are implementing in this area. We also provide various training programs to increase understanding and acknowledgment of harassment and utilize the intranet to raise awareness of harassment issues. In addition, we have set up a "Harassment Hotline," as well as various other systems to prevent harassment, such as retaining an external clinical psychologist, social welfare nurses and other professionals to work on company premises.

## Employment of individuals with physical challenges

We are actively committed to hiring physically challenged individuals to support their independence in society.

Group company Chuden Wing Co., Ltd. opens new employment opportunities for physically challenged persons, and is certified as an exceptional subsidiary<sup>\*1</sup>. The 33 physically challenged employees<sup>\*2</sup> and 12 other staff members combine their capabilities in businesses such as design and printing, marketing novelties and gifts, gardening<sup>\*\*</sup>, and document delivery. Including Chuden Wing, as of June 1, 2007, the percentage of our physically challenged employees is 1.95%, meeting the legal requirements.

## Establishment of good labor-management relations

Chubu Electric Power and its Labor Union\*4 engage as equals in collective negotiation on matters such as working conditions and annual bonuses. They also confer on matters related to business operations.

We hold meetings to encourage the free exchange of ideas between our executives and the labor union on subjects such as management policy, in order to maintain ties of mutual understanding and communication.

### <sup>11</sup> Exceptional subsidiary: The employees of subsidiaries incorporated with special consideration for hiring physically challenged individuals can be considered employees of the parent company for purposes of legal hiring requirements, if they meet certain criteria. Such subsidiaries are called "exceptional subsidiaries."

- \*2 Physically challenged persons: This encompasses individuals born with either physical or mental disabilities, or both.
- \*3 Gardening business: We prepare soil, sow seeds, grow saplings and plants, and arrange the beautiful, carfeully-grown flowers and plants in flower gardens and planters. We also carry out maintenance, such as watering, fertilizing, weeding, and realanting.
- \*\* Labor Union: Our employees, except those representing the corporate interest, are required to join the Chubu Electric Power Labor Union in accordance with the labor agreement. (Union shop system)



### Employees

### **Ensuring continuous employment**

At Chubu Electric Power, we provide opportunities for employees to improve their job skills, and support motivated employees to further their career. We also have a program to allow retired employees to work on a contract basis.

### **Open recruitment system**

In April 2002, we established the "Open Recruitment System" allowing highly motivated employees to demonstrate their talents in new business fields.

In order to transfer our employees based on their desires and initiative, we implemented this system for transfers to the sales field in February 2003, and to other divisions in April 2004. As of the end of fiscal year 2006, there had been 560 applicants, and 260 of them had been transferred to other divisions.

### Ensuring employment opportunities after retirement

### Utilization of post-retirement employment support program

In April 2004, we instituted a scheme for postretirement employment named "Second Life Challenge." The object is to assist employees in their endeavors to find new work or go into business after age 60.

In addition to giving employees aged 60 or over introductory training as an opportunity to think about their life plans, we also offer subsidies to attend training and classes outside the company, as well as leave to attend educational institutions. As of the end of fiscal year 2006, about 722 employees have utilized this scheme (number of employees taking training courses).

### **Re-employment system** Harnessing the power of senior staff

In April 2002, we established a system for the

rehiring of employees who have reached the age of mandatory retirement as "senior staff" in order to make broad use of their knowledge, skills, and experience. In April 2006, we revised this system in order to more actively utilize the resources offered by senior citizens. Under the new system, we seek to employ senior staff in positions requiring high levels of expert knowledge and skills, a certain level of experience, and jobs with set duties. As of the end of fiscal year 2006, we employ 173 senior staff in various positions.

### Career and skills development based on individual target management

In April 2003, we introduced a framework based on a voluntary target-management program into our human resources and wage system. The aim of the framework is for each employee to set ambitious targets, in order to harness the motivation and autonomy of each employee and compensate employees based on performance. Performance evaluation is conducted at the end of each period in the form of an interview, where the supervisor evaluates each employee's achievements, attitude, and demonstrated skills, and by also considering the employee's selfevaluation.

### Human resource development **Training & Education**

We have a diverse set of human resource development programs designed to allow each employee to recognize his or her roles in the organization and strive to enhance their skills and abilities with a sense of motivation. These programs include specific education programs for employees of different levels, programs designed to pass on/master technical skills, and on-the-job training programs, as well as programs that focus on communication skills.

### **Balancing Work and Personal Life**

We are offering various support systems to allow our employees to demonstrate their talents at work, while also enjoying a fruitful life at home, so that we can fulfill our obligation as a good corporate citizen.

### **Balancing work** and personal life

In October 2005, we revised our work system by introducing a planned holiday and designated work program, to allow our employees to balance their work and personal life and also encourage them to participate in community activities. The aim of this program is to specify flexible work days and working hours, based on the individual's preferences and in keeping with the work situation, enhancing both our ability to plan the execution of work and employees' home lives.

### Support for balancing child rearing and nursing care with work

Our childcare leave program\*1 allows employees to take leave until their child reaches the age of 18 months, or the last day of the fiscal year in which the child turns one year of age, whichever is later.

We also have a shortened working-hour program that is available to employees until the last day of the fiscal year in which their child turns six years of age.

Our long-term care/nursing care leave program\*2 allows employees to take up to two years of leave if they must provide long-term or nursing care to a family member. This program is also designed to alleviate the financial burden on employees providing long-term and nursing care by paying a portion of the employee's salary while he or she is taking leave under this program. In fiscal year 2007, we will introduce the

Personal Support System, whereby employees can receive subsidies on expenses paid for childcare facilities, care facilities and other assistance

# services.

### Enhancement of personal support leave

We support active efforts by our employees to fulfill their roles as members of their families and communities. Our personal support leave program allows employees to take leave to recover from an injury or illness, nurse a sick or injured child, volunteer, register as a donor, obtain an official certification or otherwise advance their education and qualifications, or for other personal reasons.

### **Conducting employee** satisfaction surveys

mechanism to get feedback from our employees. In fiscal year 2006, we utilized the intranet to conduct surveys to measure and study our employees' work satisfaction and workload in the four categories: Work, Workplace, Supervisor(s) and the Company.

We are also improving our survey method by adding questions to the questionnaire we employ. The questions relate to CSR, such as matters of individual rights and ensuring harmony with local communities. The results of our latest surveys show that employee satisfaction is improving slightly, and our employees are also feeling less pressure from work, compared with the previous year's results.

We will analyze the results of the survey further to devise and implement necessary measures.

### **General Business** Action Plan

We are actively committed to achieving the targets of our fivevear General **Business Action** Plan (April 2005 to March 2010), in accordance with the Basic Law for a Gender-Equal Society and the Law for Measures to Support Youth Development.

We conduct employee-satisfaction surveys as a

[Related data] \*1 In fiscal year 2006, 113 employees utilized our childcare leave program. \*2 In fiscal year 2006, 10

employees utilized our longterm care/nursing care leave program

68

### **Employees**

Management and Eco Performance

Social Performance

Employees



Keynote speech by Chairman Hayashi of Daiei, Inc.

### Three pillars

 Creation of opportunities for female employees to demonstrate their abilities We will appoint more women to the various positions in each division by training female staff as specialists. We will focus on those positions where a woman's viewpoint will provide new insight and greater value.

 Awareness reform and improvement of support

systems We will implement various measures (through improvement of personnel/education systems) that will allow individuals, both men and women, to fully demonstrate their abilities in order to further their

External collaboration As a company firmly noted in the Collub Electric Power will create venues for local corporations in the Chubu area to exchange information regarding the utilization and promotion of female staff, and balancing work with personal life, and also organize activities (workshops, seminars, etc.) with a focus on these areas.

### Snapshot of Chubu Electric Power

Of our 16,025 employees, 1,552 (9.7%) are women. We have 60 women in management positions. (Both figures are as of the end of fiscal year 2006.)



For Chubu Electric Power to survive in an increasingly competitive energy market crammed with new entrants from various industries and segments, and to remain a company trusted by its customers and providing a rewarding work environment for its employees, it is imperative that we build a corporate culture where our diverse workforce – consisting of male and female employees of all ages and different attributes – can demonstrate their unique talents.

## Utilization and promotion of female staff

At Chubu Electric Power, we believe the utilization and promotion of female employees is a top-priority management issue. As such, we are driving a project to promote the greater utilization of our female staff, aimed at fostering a corporate culture where female employees can fully demonstrate their abilities, while infusing energy into the organization by utilizing "woman power."

In July 2007, we established a dedicate section within the Personnel Division to promote greater utilization of our female staff.

## The three pillars of the project to promote greater use of female staff

The project will be carried out in stages under medium and long-term action plans



Around 150 participants in the workshop, held as a part of the kickoff event, engaged in animated discussion.

based on the three pillars of: creation of opportunities for female employees to demonstrate their abilities; awareness reform and improvement of support systems, and; collaboration with external organizations. The project will also reflect the current state of Chubu Electric Power and specific issues facing the company.

f-project

### Organization of kickoff event

For the project to succeed, changing the corporate culture and mindset of individual employees is crucial. Accordingly, we organized a kickoff event in April 2007 to communicate the aim and activities of the project to all employees and obtain their understanding. We invited Fumiko Hayashi, the then chairman of Daiei, Inc., to present a keynote speech entitled "Developing the future of business – Harnessing the synergy from the collaboration between men and women in the workforce." A workshop, followed by a panel discussion, was also held on expanding the role of women in the workplace.

### Establishment of Chubu Diversity Net

In January 2007, we established the Chubu Diversity Net together with INAX Corporation, Toyota Tsusho Corporation and Denso Corporation, as a venue for local companies to exchange information on specific efforts to promote collaboration on workforce diversity.

### Labor Safety and Well-Being

### Group-wide activities on safety and well-being

### Safety and well-being campaign policies

To promote comprehensive safety and wellbeing, we convene an annual ad-hoc committee to consult on and determine the direction of company-wide safety and well-being activities based on opinions from the regional offices and supervisory units.

In accordance with the committee guidelines, the regional offices formulate their own guidelines, and the locations make plans for implementation. Performance of the PDCA cycle on an annual basis is linked to more effective measures.

## Group-wide safety and well-being activities

To promote the development of labor welfare throughout the Group, we organized a council on safety and well-being among Group companies and are taking various steps on this front. Convening about four times a year, the council facilitates close communication among Group companies, and works to prevent accidents, disease, and injury through publicity and consciousness raising activities on safety and health management, such as joint patrols and seminars.

### Efforts to eliminate accidents

### Efforts to promote traffic safety

To prevent accidents, we are implementing various measures designed to promote traffi safety, such as the Driver's License System for Operation of Company Vehicles<sup>\*1</sup> and a Safe Driving Trainer System<sup>\*2</sup>.

### Rigorous safety instruction for contractors

To eradicate accidents among contractors, we hold ad-hoc conferences composed of the units in charge of safety and those handling the execution of necessary work based on safety campaign policies. We prepare guidelines to counsel contractors on accident prevention, and furnish them with thorough safety instruction.

## Promotion of mental and physical health

### Promoting mental health

Carrying on from the previous year, in fiscal year 2006 we continued to position the treatment of mental illnesses<sup>\*3</sup> as one of our top priorities. As such, we expanded our measures to cover primary prevention (prevention of symptoms), while firmly establishing secondary and tertiary prevention measures. Specifically, we stepped up the education of managers and on-site health professionals on detection of and response to symptoms, and provided useful tips on how to release and reduce stress on the intranet and through other means.

### Promoting physical health

We provide health information on a regular basis and ingrain the mindset of "independent health management" in our employees by encouraging them to follow up after each health examination, each incidence of a disease, or each accident. Key policy components of our companywide policy safety and well-being campaign (fiscal year 2007)

- 1. Safety (1) When driving
- Eliminate traffic accidents by always checking safety.
- (2) At work Eliminate work-
- related accidents
- by observing basic rules without fail.
- 2. Well-being
- Mental health care measures
   Physical health care measures
   Measures to
- prevent health problems due to overwork
- \*1 Driver's License System for Operation of Company Vehicles: Established in 1979, this system requires employees to receive the prescribed training and obtain a license in order to drive company vehicles.
- \*2 Safe Driving Trainer System: At each location, "Chief Safe Driving Trainers" are designated, who have been specially trained to provide instructions in safe driving. As the key persons for traffic safety instruction at the facilities, they take various steps to prevent accidents.
- \*3 Treatment of mental illnesses: Primary prevention (health enhancement and prevention of disease development)
  \*Secondary prevention (early detection and early treatment of disease)
  \*Tertiary prevention (promotion of swift reinstatement of workers and prevention of recurrece of disease)

### **Stakeholder Dialogues**

In addition to explaining our CSR efforts in a







clear manner to community members, it is also vital to maintain two-way communication with them to receive feedback that we can utilize in future environmental management. On March 6, 2007 we held our third Stakeholder Dialogue, attended by around 20 people, including representatives from consumer groups and environment-related NPOs in the Nagoya area and its suburbs as well as environmental representatives from local corporations. The key focus of the dialogue, which was centered on the theme "Reading Chubu Electric Power's CSR Report 2006," was to discuss the actions Chubu Electric Power must take to meet its societal expectations and fulfill its responsibilities. After reading the report, the participants presented their feedback on the report, followed by a Q&A session. The

participants also engaged in discussions as to what they would expect from Chubu Electric Power in the area of social contribution, among others.

### Key opinions and our actions

- There is so much content and the typeface is small. There are also many technical terms. Enlarge the font size of notes and main text to make the report easier to read.
- → The style was changed from the triplecolumn to double-column page layout to make the contents easier to read. Also, the font size of notes was enlarged and their positions were changed.
- Quantitative and gualitative measures should also be stipulated for social contribution activities, like the measures stipulated under the environmental action plan.
- ➡ We will examine various standards used by other corporations to set our CSR targets.

- There is not enough explanation about nuclear power generation, such as the need to promote nuclear energy.
- → The management/economic report includes a summary of our approach and topics regarding nuclear power.

- · Are there more specific measures to achieve the reduction target for CO2 emissions?
- → We will work actively and steadily toward improving the utilization of nuclear power stations, developing high-efficiency LNG thermal power generation systems, and utilizing the Kyoto mechanisms.

- · What is your view of promoting collaboration with NPOs and so on?
- → We will promote collaboration with NPOs and so on through various activities such as the "Chuden Eco Partnership" started in 2006.

- · There is no mention of CSR activities - such as social contribution programs - implemented outside Japan.
- → We are cooperating to improve the environment in other countries through consulting activities. We are also actively participating in environment-related overseas projects.



### **Opinions exchanged with Mie University** on how to build a sustainable society

In September 2005, we signed a framework cooperation agreement with Mie University. The aim of this agreement is to contribute to the sustainable development of local communities by expanding our research collaboration with the university, currently focused on the science and engineering fields, to a wider range of fields including the arts and humanities. We will further collaborate with the university in various areas, such as education on the environment and energy.

In October 2006, Mie University issued its inaugural Environmental Report 2006 in line with its USR (University Social Responsibility) mission to fulfill the university's responsibility to help create a sustainable society. In line with this, we held an event to exchange opinions with university students and faculties on how we can contribute to the building of a sustainable society, based on the aforementioned report and Chubu Electric Power's CSR Report 2006. Sharing the common goal of contributing to communities,

Mie University and Chubu Electric Power agreed to collaborate on promoting the establishment of USR and CSR frameworks.

### Comments on Chubu Electric Power's CSR Report

We also received the following comments on our CSR Report:

 Utilize the CSR Report within Chubu Electric Power and follow up on the feedback.

→ The CSR Report 2006 was distributed to all employees as a means to communicate our environmental efforts and conditions. Some of the feedback received from our employees is reflected in the report 2007. We will further utilize the report and continue to follow up on the feedback we receive to improve the report further.

· Clear links should be provided between the items included in the scope of the CSR Declaration and items described in the report, along with relevant actions.

→ Our efforts and policies regarding the basic philosophies spelled out in our CSR Declaration, such as safety, stable supply and compliance, are explained in a dedicated section in an earlier part of the report. We also describe our efforts in relation to each stakeholder group defined in our CSR Declaration to explain the specific actions taken.

 There are sections where the descriptions are too general. They should be accompanied by specific examples and explanations.

➡ We will continue to improve the report by using specific descriptions and incorporating examples.

- · The report will be more convincing if specific examples are provided on how the results of activities led to further improvement or new initiatives.
- → We will continue to introduce examples of instances when the results of internal and external studies and so on led to improvements. We will also incorporate the progress of ongoing activities, including any changes made.



Mie University students visited our booth at Messe Nagoya (October 2006) as a part of the information exchange program.

### **Third-party Views**

To make our CSR report more readable, we had three consumer life advisors check the terminology, language, graphics, and other aspects of our 2007 Chubu Electric Power CSR Report.

### **Remarks on CSR Report 2007**

Electricity is a safe, convenient form of energy we cannot live without. Even without using the word "CSR," consumers are already paying attention to how electric power companies are managing their operations. Global warming is receiving growing attention as a problem affecting things closer to home, and consumer's interest in this issue will only increase.

In addition, consumers are observing corporations with critical eyes in the aftermath of a series of unnerving events such as product defects leading to accidents, as well as corporate scandals. We will be monitoring you closely to see how you respond to our concerns.

In this report, we can see that, in your effort to achieve a stable supply of electricity, you are also committed to disclosing negative information. For example, there is a detailed summary about the problems experienced by Hamaoka Nuclear Power Station Unit 5, including the cause, current status, and future outlook, to preemptively ease any shareholder anxiety that might arise from a lack of information. On the other hand, however, certain issues such as data manipulation (non-compliance event at power stations) are not explained in detail in terms of their background and facts. We expect you to continue working to establish a system whereby the accountability rules relating to the disclosure of all information accurately and promptly will be observed unfailingly, so as to properly communicate the facts to the public.

The section at the beginning, where you explain your efforts to achieve continuous growth with emphasis on diversity to create an "open corporate culture," is refreshing. We hope to see more active efforts to promote CSR-focused procurement activities, internal measures to provide more opportunities for women, and harnessing environmental activities. Collaboration with citizen's groups and development of energy solutions will certainly provide Chubu Electric Power with new insights as well as greater opportunities to communicate with society at large. We like the segment on the "Chuden Eco Partnership," which is provided as an example of one such effort, as it is accompanied by illustrations and straightforward descriptions of the issues and the present status on these activities.

The report is divided into multiple sections corresponding to key categories to help readers organize the contents better. It is commendable that you have listened to, and acted upon, the feedback from independent sources and third parties on the previous report, such as explaining the terms in margins and reducing the volume of text. As representatives of the public, we will continue to actively monitor your future reports, with great interest, to see how you will utilize the feedback received from many stakeholders of Chubu Electric Power.



Two consumer life advisors and a consultant discuss the CSR report with our editorial board

This CSR Report describes the status of efforts by a company that has a significant impact on the global environment. We hope that our feedback will help create an even better report that more people will take an interest in, and want to read.

Consumer life advisors Emi Nakabe Kiyono Hayakawa

## Schematic Diagram Of Chubu Electric Power System

(as of the end of March 2007)



## **Main Business Locations**

1 Toshin-cho, Higashi-ku, Nagoya City 461-8680, Japan Headquarters Nagoya Regional Office 2-12-14 Chiyoda, Naka-ku, Nagoya City 460-8310, Japan Shizuoka Regional Office 2-4-1 Hontori, Shizuoka City 420-8733, Japan Mie Regional Office 2-21 Marunouchi, Tsu City 514-8558, Japan Gifu Regional Office 2-5 Mieji-cho, Gifu City 500-8707, Japan Nagano Regional Office 18 Yanagimachi, Nagano City 380-0805, Japan Okazaki Regional Office 7 Aza daidouhigashi Tozaki-cho, Okazaki City 444-8606, Japan Tokyo Regional Office 5th Floor, Nippon Press Center Building, 2-2-1 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0011, Japan Washington Office 900 17th Street N.W., Suite 1220 Washington, D.C. 20006, U.S.A. London Office Nightingale House GF, 65 Curzon Street, London W1j 8PE, U.K. Bangkok Office Unit 4, 18th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Phatumwan, Bangkok 10330, Thailand Doha Office (temporary address) Links Office No.4, Ground Floor, Al Mirqab Tower, Al Corniche P.O. Box 24863, Doha Qatar

Phone: +81-52-951-8211 Phone: +81-52-243-9100 Phone: +81-54-255-1111 Phone: +81-59-226-5555 Phone: +81-58-265-1122 Phone: +81-26-232-9060 Phone: +81-364-55-5005 Phone: +81-3-3501-5101 Phone: +1202-775-1960 Phone: +44-20-7409-0142 Phone: +66-2-654-0688 Phone: +974-4954-607



Recycled paper has been employed for the body of this report, while the front and back covers use paper made from lumber from domestic forest thinning. The report has been printed with biodegradable soy ink, and the "waterless" printing process involved no use of harmful liquid wastes.

## Chubu Electric Power Co., Inc.

http://www.chuden.co.jp/english/index.html

Please visit our website for information updates.

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