Business Operations That Fulfill Social Responsibility

The J-POWER Group undertakes business operations that fulfill our corporate social responsibility (CSR) by continuously reinforcing the foundations of business operations including management and human resources and efforts to achieve mutual benefit with local communities and society as well as environmental management in accordance with our corporate principle of contributing to the sustainable development of Japan and the rest of the world in response to changes in social conditions and the business environment.

Foundations of Business Operations

Corporate Governance

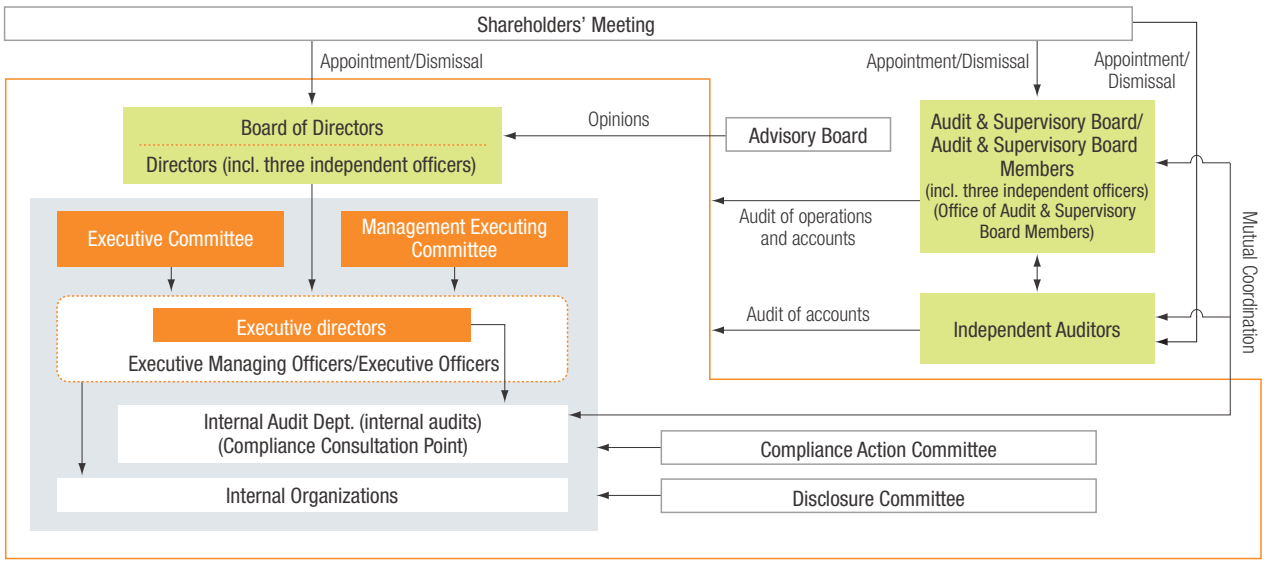
On October 30, 2015, J-POWER established a Basic Policy on Corporate Governance that prescribes specific measures with respect to the Corporate Governance code. We will engage in continuing measures to further improve our corporate governance with the aim of achieving sustainable growth and medium to long-term increase in corporate value.

WEB **Basic Policy on Corporate Governance**
http://www.jpower.co.jp/annual_rep/pdf/cg_houshin1510.pdf

Officers and Management Council System

At J-POWER, members of the board focus on supervisory functions while executive directors, executive managing officers, and executive officers perform executive functions. In addition, an independent director participates in management decision-making from outside directors based on specialized knowledge and experience. Under the Management Council System, J-POWER established an Executive Committee, which deliberates on matters that are of importance to the company as a whole, and a Management Executing Committee, which handles important matters relating to specific aspects of business execution. The system facilitates appropriate and timely decision-making and efficient corporate operations.

J-POWER Group's Corporate Governance Framework (as of the end of June 2016)



System of Audits and Supervision

J-POWER's Audit & Supervisory Board comprises five Audit & Supervisory Board Members, of which three are Outside Audit & Supervisory Board Members including one fulltime member, enhancing the oversight functions of the Audit & Supervisory Board. Separate from the audits conducted by the corporate auditors, the Internal Audit Department, which is independent from J-POWER's other internal organizations, conducts internal audits, and individual organizations also perform periodic voluntary audits.

Group Internal Controls

To implement internal controls in accordance with the Financial Instruments and Exchange Act, J-POWER creates internal regulations to ensure the reliability of financial reporting and operates internal control systems. In FY 2015, we confirmed the status of development of internal control systems and their operational status, determined that they are effective, and reported the results to the Prime Minister in the form of an internal control report.

Information Disclosures

With regard to the outside disclosure of information, the Disclosure Committee chaired by the president makes active, fair, and transparent disclosures of corporate information.

The J-POWER Advisory Board was established in September 2008 to receive advice and proposals concerning corporate management from outside experts in a wide range of fields.

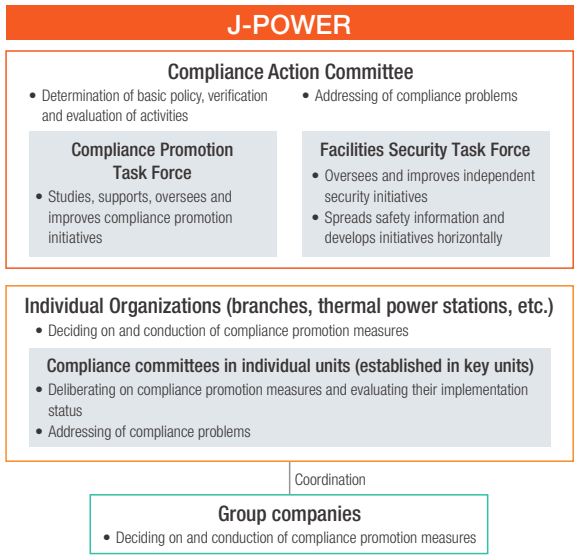
Compliance Initiatives

Implementation Measures

In accordance with its corporate philosophy, J-POWER adopted Corporate Conduct Rules and a Compliance Code. To ensure compliance, J-POWER established the Compliance Action Committee and other organizations shown below and takes Group-wide action with the participation of Group companies.

We also established compliance consultation hotlines staffed by internal and external experts to prevent and quickly identify violations of laws and regulations and breaches of corporate ethics. To raise awareness of compliance, we conduct training and hold lectures on compliance topics, create opportunities for officers and employees to exchange views and for personnel responsible for compliance matters to exchange information, and conduct compliance-related questionnaires, e-learning, and other programs.

J-POWER Group Compliance Promotion Structures



WEB **Outline of the Compliance Code**
http://www.jpower.co.jp/annual_rep/ann14000.html

Information Security

Basic Policy

As advanced computerization and the use of information technology by businesses advances, instances of cyber terrorism and attacks targeting specific companies have increased, making information security more important than ever. The J-POWER Group, a key infrastructure business responsible for stable electric supplies and construction of nuclear power plants in Japan and other countries, must ensure higher levels of information security.

J-POWER adopted a Basic Policy on Information Security and publicizes Group-wide information security countermeasures on its website.

Specific Measures

Each year, we formulate and implement an annual plan setting forth specific information security countermeasures based on the status of activities in the preceding year. The main measures are described on the J-POWER website.

To rapidly and appropriately respond to IT harm to important systems relating to electric power operations, we are reinforcing collaborative systems with relevant government ministries and agencies and the electric power industry as a whole and contributing to the IT aspects of stable electric power supplies. With regard to construction of the Ohma Nuclear Power Plant, IT divisions are working with nuclear power divisions to implement robust security measures.

WEB **Basic Policy on Information Security**
http://www.jpower.co.jp/english/privacy/privacy_003_e.html

WEB **Information Security Countermeasures**
http://www.jpower.co.jp/english/privacy/privacy_004_e.html

Emergency Management

Crisis Management Measures

The J-POWER Group recognizes a variety of events as emergencies, and as an electric power supplier, the greatest emergency would be an impairment to the production and distribution of electricity, our product, that prevented the supply of electric power. We take the following measures to prevent such an occurrence.

(1) Installation of appropriate facilities and development of disaster recovery systems in preparation for natural disasters including earthquakes, typhoons, lightning strikes, and tsunami.

(2) Enhanced security to prevent malicious and violent conduct.

(3) Ongoing enhancement of facility inspections to prevent major impediments to electric power supply and appropriate repairs and upgrades in response to deterioration, decline of function, and breakdowns.

(4) Preparation of action plans for responding to pandemics and other events that could have a major impact on business operations.

The J-POWER Group has established the following systems to accurately forecast and prevent accidents, facility incidents, and other crisis events and to respond promptly and appropriately if such events occur and manage them.

Emergency Management Systems

(1) Emergency Response Team

A permanent organization at the J-POWER Headquarters. The Team oversees immediate responses and emergency management operations in the event that an emergency occurs.

(2) Emergency managers and emergency duty personnel

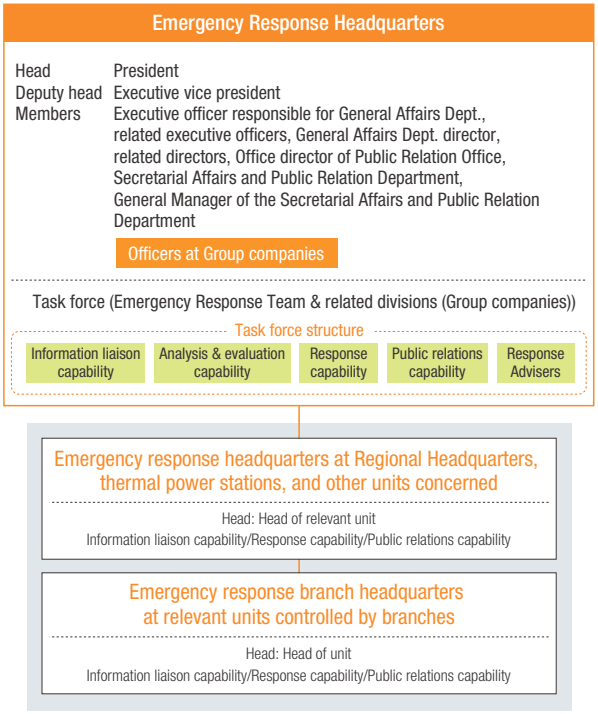
Emergency managers and personnel are appointed at the Headquarters and Regional Headquarters with relevant local units to take first-response action and report information.

(3) Emergency Response Headquarters and branches

When an emergency is predicted to occur or occurs and the seriousness warrants emergency countermeasures, the Emergency Response Headquarters (and branches) are established.

Disaster preparedness training underway

Emergency Countermeasures (after establishing Emergency Response Headquarters)



Disaster Response and Business Continuity Measures

As an electric power supplier with responsibility for vital lifelines, J-POWER has been designated a designated public institution under the Disaster Countermeasures Basic Act.

To carry this out, we actively implement physical measures in anticipation of a large-scale natural disaster as well as non-physical measures including the formulation of various rules relating to the occurrence of accidents and establishing systematic disaster response systems that cover the entire organization from the head office to local bodies. We are also reinforcing disaster response systems to ensure business continuity even in the event of damage that exceeds expectations.

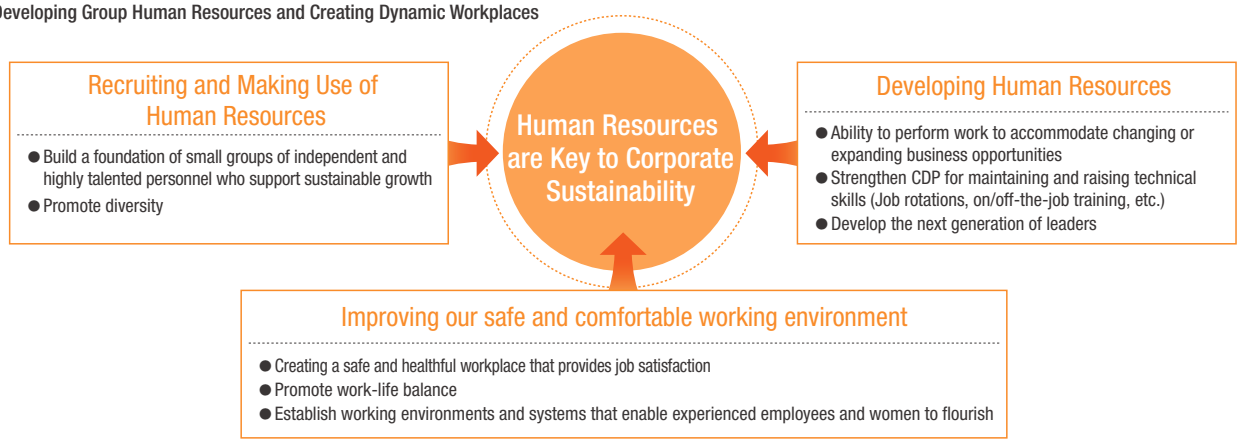
With regard to business continuity, considering the importance of immediately shifting to an emergency structure following the occurrence of an emergency and undertaking recovery operations, we have determined the minimum necessary actions to maintain business during an emergency. In order to heighten the effectiveness of this framework, we are conducting periodic disaster preparedness training and other preparation, as well as confirming the effectiveness of manuals and the status of emergency stores. In accordance with Tokyo Metropolitan ordinances, the J-POWER Headquarters is preparing for a Tokyo Inland Earthquake by increasing its stores of emergency foodstuffs and taking other measures.

Recruiting and Developing Human Resources and Creating Dynamic Workplaces

The J-POWER Group strives to provide safe, comfortable working environments for every one of our employees. We consider human resources to be valuable assets upholding our fundamental sustainability as a corporation. At the same time, we endeavor to create a corporate culture that respects the character and individuality of our employees and makes them feel it worthwhile to constantly take on new challenges.

The J-POWER Group positions human resource recruitment and development as crucial policy measures for the company's sustainable growth. We are reinforcing the foundation for career development, with a focus on CDP (the Career Development Program), establishing workplace environments and systems that make advantageous use of diversity, and promoting work-life balance in order to improve individual skills and workforce productivity.

Developing Group Human Resources and Creating Dynamic Workplaces



Recruiting and Making Use of Human Resources

The J-POWER Group's Conceptual Approach to Human Resource Recruitment

The J-POWER Group approach is to conduct stable hiring in the interest of sustainable growth, and also to seek human resources from people in a wide range of fields and age groups to whom we provide opportunities to take an active part. With regard to personnel hiring and utilization, the J-POWER Compliance Code stipulates respect for individuality and human rights and prohibits discrimination. We are also conducting awareness-raising on these matters in human rights training. We are currently creating systems and working environments that enable our diverse personnel to fully demonstrate their capabilities, without regard for gender, age or other such distinctions.

Employment of New Graduates (J-POWER)

	FY 2014	FY 2015	FY 2016
Men	59	60	**66**
Women	5	2	**3**
Total	64	62	**69**

Measures to Promote Diversity

As a measure to further increase the hiring of elderly people, we have reviewed the continuing employment system. This is a system for employment of people who have passed retirement age, and it allows those who desire employment to continue working until the age of 65. In combination with the personnel registration system (which can be used up to age 70), which introduces job opportunities in the Group, we will harness the experience, technology, and motivation to work possessed by older people in the Group and make use of it for the sustained growth of our business. As of the end of March 2016, 113 employees (J-POWER) had taken advantage of the continuing employment system and related programs.

The employment rate for persons with disabilities was 1.95% as of June 1, 2016. A "consultation desk to provide employment assistance and information on working environments to employees with disabilities" having been established, we will continue to take measures to enhance working environments and promote understanding through such initiatives as making office buildings barrier-free. In the future, we will continue striving to raise the employment ratio.

We will also take steps to improve our management training with a view to building a workplace where diverse human resources can take active part.

VOICE

Aiming to Build a Workplace Where Diverse Human Resources Can Take Continuously Active Parts

The J-POWER Group operates in a changing business environment, and in order to make maximum use of the human resources in future business operations to create new corporate value and grow, we are striving to create workplaces and an organizational atmosphere where a diverse workforce that includes recently hired employees to veterans with various individual attributes can work with enthusiasm and display their skills as a single team.

To support worksite on-the-job training, which is the key to human resource development, we are working to enhance training for leaders while pursuing effective collaboration between on-the-job and off-the-job training including updating training programs based on changes in the workforce age composition and work styles.

Human Resource Development Office, Personnel and Employee Relations Department

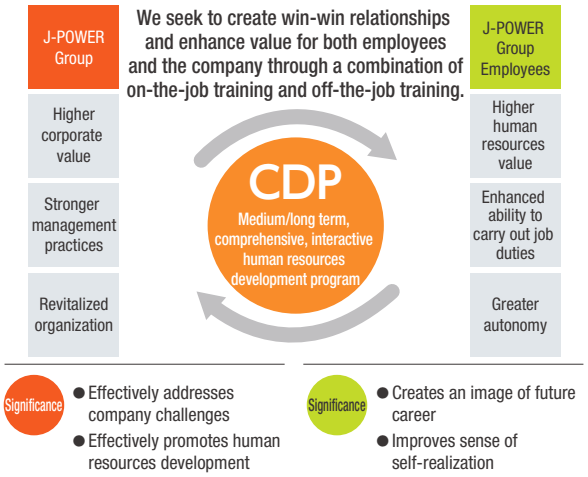
Yuuichirou Horiike

Human Resources Development

Human Resource Development Programs

Our aim in the J-POWER Group is to develop all our employees into independent, talented, professional human resources who contribute to the organization with a multiplicity of specialized knowledge and a broad perspective. We are adopting the Career Development Program (CDP) as a measure to achieve that aim.

CDP Overview



Evaluation and Assessment System

The J-POWER Group established an evaluation system in 2004 that is based upon a goal management system. Through initiatives aimed at achievement of specific goals, the system encourages every employee to perform work autonomously, heighten his or her achievement motivation, and improve his or her work performance. We also seek to realize our organizational strategies by having employees engage in mutual collaborative action that is based upon organizational goals.

Various Training Programs

The J-POWER Group is conducting various kinds of training as Off-JT, including level-specific training, career training, objective-specific training, and divisional training. These programs are conducted to develop human resources in line with CDP. We have also established training facilities for the technical divisions (civil engineering and architectural engineering divisions; hydroelectric power, transmission and substation, and telecommunications divisions; and thermal power divisions). Systematic development for engineers is conducted at these facilities.

Helping Employees Voluntarily Develop Their Careers and Abilities

J-POWER is introducing a self-assessment system for employees to convey their career planning hopes and intentions to the company once a year and discuss them with their immediate superiors. We are also introducing a voluntary training incentive program and an academic training program to support employees developing their abilities on their own initiative.

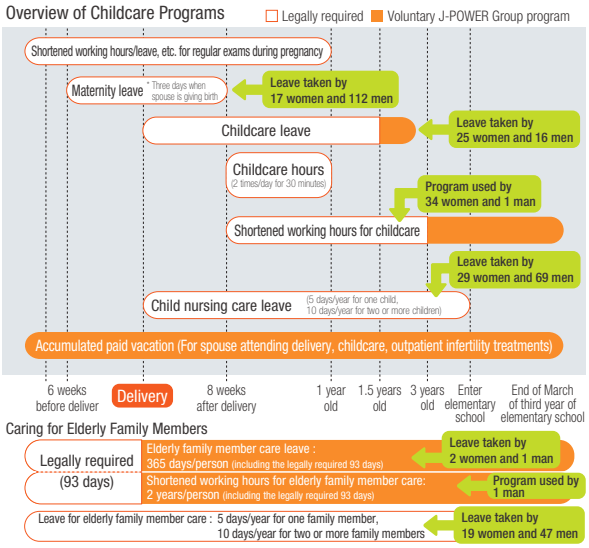
A level-specific training session for employees in their fifth year

Developing Environments to Create Dynamic Workplaces

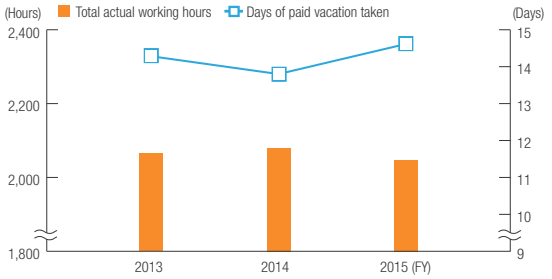
Toward Realization of a Work-Life Balance

We are actively developing working environments and cultures that enable every employee to autonomously enhance their work and personal life and focus on highly creative work. We are taking measures to help employees achieve a good work-life balance including enhancement of childcare and nursing care support programs, encouraging their use and normalizing working hours.

Overview of the Childcare and Nursing Care Support Programs and Results in FY 2015 (J-POWER Group)



Change in Total Actual Working Hours and Paid Vacation Taken (J-POWER)



"Platinum Kurumin" Special Certification Mark

As a corporation that supports childcare, J-POWER received "Kurumin" certification. We also received the special "Platinum Kurumin" mark certification, which is awarded only to corporations with measures that have met an even higher standard. We will continue making improvements for an even better work environment in the future so that all employees will be able to harmonize their work and their personal life, and exercise their abilities fully.

Consultation Desk

We are working to build a work-friendly environment in the workplace by establishing a consultation desk where employees can discuss working hours, the workplace environment, sexual harassment, and power harassment. We have also developed in-house regulations, manuals, and other such resources related to harassment, and we are implementing education for increased awareness in level-specific training courses, posters, and other such measures to resolve problems as well as to prevent them. Our goal is a working environment where human rights and individuality are respected and where diverse personnel are completely at ease in going about their work.

VOICE I am Grateful for Our Support Programs

After receiving my second maternity leave and childcare leave, I returned to work in April 2016. Right now I am benefiting from the reduced hours (shortened working hours) program. Every day is busy for me, taking care of an infant and a three-year-old, so I am really grateful to have the reduced hours program. Shortening my hours at work gives me the feeling that I can cope with things. I can make the time to spend with my children, so I can read a picture book with them before bedtime, or talk with them in the morning while I'm getting ready, and hunt for insects on the way back from daycare. Everybody in the workplace offers some kind of support, as well, and all this fills me with feelings of gratitude. I will be in the position of needing support for some time yet, but when my turn to give support comes, I hope to give good help to my colleagues and juniors.

Project Promotion Office, International Business Development Department
Mina Yamazaki

Safety and Health Management

J-POWER Group's Health and Safety Measures

The J-POWER Group's health and safety measures are intended to create safe and healthy workplaces that provide meaningful work as the foundation of our business activities. J-POWER and Group companies each have roles and responsibilities and collaborate on implementing health and safety management to prevent workplace accidents and maintain and improve the health of our employees.

Measures Pursuant to the Group Occupational Safety and Health Plan

The J-POWER Group established a Group Occupational Safety and Health Plan that organizes common issues that the Group needs to address and set subsequent priority topics. Based on the plan, individual Group companies formulate their own occupational health and safety plans and take measures in cooperation with the Group.

Safety Priorities

(1) Promoted Communications through Collaboration among Personnel at Different Worksites and Offices
(2) Prevention of repetitive-pattern accidents
(3) Prevent traffic accidents resulting in injury or death and other commuting-related accidents

Health Issues

(1) Measures against lifestyle-related disease
(2) Measures to promote mental health

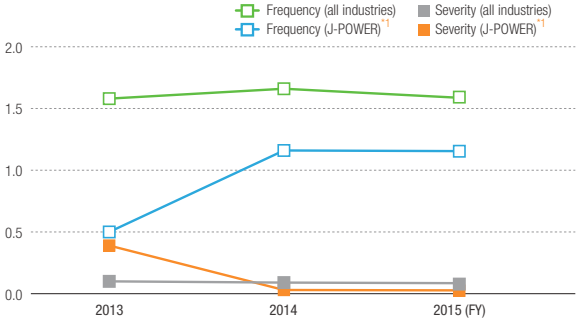
Initiatives for the Prevention of Workplace Accidents

In recent years, many occupational accidents have been work accidents relating to construction and other work, and consequently, it is important to conduct unified safety activities that include cooperating companies. As a result, we are taking measures to invigorate communications throughout the workplace and raise safety awareness while taking ongoing measures to prevent the occurrence of all types of occupational accidents and traffic accidents including repetitive-pattern accidents.

Incidence of workplace accidents*1 ★

	FY2013	FY2014	FY2015
Deaths	1	—	—
Serious Injury	2	9	8
Minor Injury	7	12	13

Accident Frequency*2 and Severity*3



*1 Accidents involving J-POWER employees and accidents involving contractors (principal contractors and subcontractors) doing construction and other work ordered by J-POWER

*2 **Frequency:** Index of the frequency of accident occurrence. (Number of deaths or injuries caused by occupational accidents per one million working hours. Covers accidents causing loss of one day or more of work. Does not include accidents of employees on temporary transfer.)

*3 **Severity:** Index of accident severity. (Number of days of work lost per 1,000 working hours. Does not include accidents of employees on temporary transfer.)

Maintaining the Health of Employees and Their Families

To maintain and improve the health of employees and their families, we encourage them to receive health checks, health maintenance guidance, and infectious disease prevention measures. In addition, we place priority on the prevention of lifestyle-related disease and mental health disorders. In order to support good physical and mental health, therefore, we conduct special health checks and designated health guidance as well as THP activities*, and we have adopted a stress check system, as well.

* **THP Activities:**
Activities aimed at total health, both physical and mental, based on Ministry of Health, Labour and Welfare guidelines on Total Health Promotion Plans.

Coexistence with the Community and Society

The J-POWER Group rolls out business based on harmonious coexistence with local communities and society as an electric power company with power generation and power transmission and substation facilities throughout Japan and overseas. Going forward, we will perform business that centers on "Communication with society" and "Contribution to society" as advocated in the J-POWER Corporate Conduct Rules as a means to drive advancement in local communities and society.

Communication with Society

The J-POWER Group implements fair and transparent public relations (PR) activities and information disclosure in order to secure good lines of communication with many stakeholders in different communities and in society. We are committed to making pinpoint response when it comes to PR in light of the characteristics of the stakeholders and our relationship with them, including local residents, shareholders, investors and society at large. We also promote stakeholder dialog, cognizant of the importance of two-way communication. In terms of information disclosure, we distribute information through our PR activities and respond to inquiries while also disclosing IR information via the Disclosure Committee.

PR and IR Activities

PR Activities

PR activities aim to enhance awareness of J-POWER as widely as possible, beginning with people in local communities. With this in mind, our basic policy is to distribute corporate information accurately and in a timely manner through all of our business activities and respond to inquiries concerning J-POWER sincerely and respectfully. With regard to reporting, we strive to distribute appropriate information at appropriate timing, including through press releases and notifications. We also utilize TV commercials and magazines for advertising and do our best to gain broad understanding of our business. J-POWER provides the opportunity for face-to-face contact with stakeholders as well as through events that include tours of power stations by each business unit, so that stakeholders can track our business activities with peace of mind.

IR Activities for Investors and Individual Shareholders

For institutional investors, we hold presentation briefings related to management plans and financial results around twice a year and actively convene meetings in Japan and overseas as the need arises. For individual investors, we hold corporate presentation briefings several times a year and provide opportunities for them to talk directly with J-POWER members, including management.

For individual shareholders, we issue a biannual shareholder newsletter (Kabunushi Tsushin) and actively disclose information on management activities and the overall condition of the company by giving tours of our power stations and other facilities twice a year.

We're working to enhance information disclosures through these types of communications activities on our website and by publishing annual reports and other documents. We also use communications tools such as Navi-Map and dam cards to conduct public relations in an accessible and user-friendly manner.

Navi-Map

We use friendly, approachable promotional characters to introduce the J-POWER business activities.

Dam cards

We have made cards showing the J-POWER dams and introducing them in a readily understandable form.

Information Disclosure

J-POWER endeavors to disseminate appropriate information on its PR and IR activities in a timely manner to stakeholders through press releases and notifications on its website.

In particular, we comply with all pertinent laws and regulations such as the Financial Instruments and Exchange Act and securities listing regulations for information related to the J-POWER Group business, operations or results that may have a significant impact on the investment decisions of stakeholders. We also formulated internal disclosure regulations for IR information and instituted a basic policy to actively disclose information in a fair and transparent manner.

J-POWER established the Disclosure Committee, chaired by the president, to investigate and set up a system for disclosing IR information and also to examine and make judgments on information that ought to be disclosed with the aim of establishing a reputation in the market and gaining the trust of society.

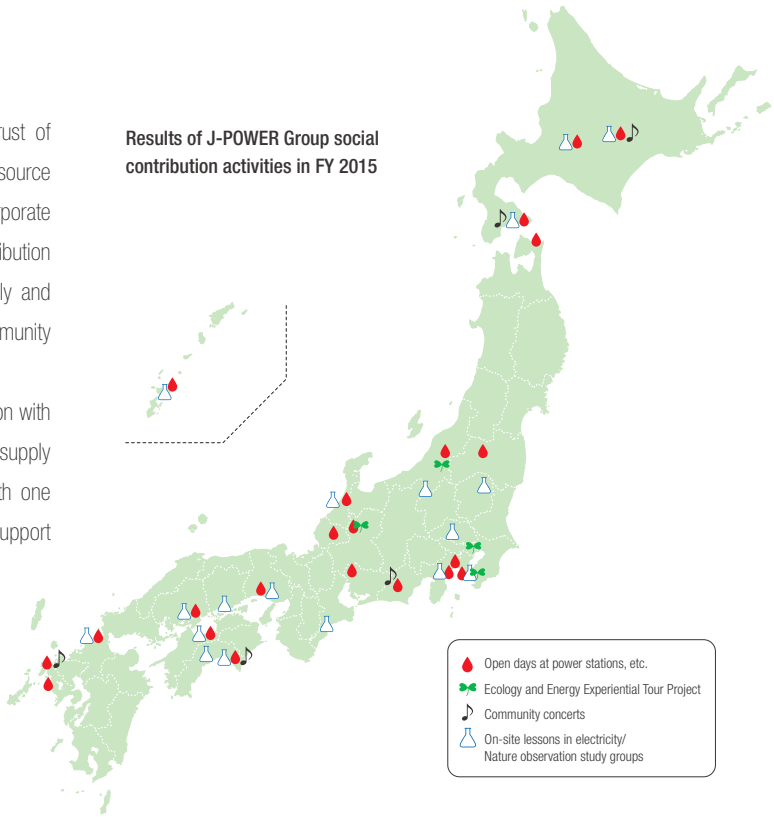
Contribution to the Community and Society

J-POWER Group Approach to Social Contribution Activities

"We pursue harmony with the environment, and thrive in the trust of communities where we live and work. We regard profits as the source of our growth, and share the fruits with the society." Under this corporate philosophy, the J-POWER Group has long engaged in social contribution activities as a member of society to help society develop soundly and sustainably. Our activities largely fall into two categories: community involvement and harmonizing energy supply with the environment.

The J-POWER Group places high value on open communication with local community members and people working to harmonize energy supply with the environment and on sharing knowledge and learning with one another. We will steadily engage in activities on this basis as well as support the volunteer activities of our employees.

Results of J-POWER Group social contribution activities in FY 2015



Nagasaki | Heliport clean-up activity

Matsushima Thermal Power Station is located on the island of Matsushima, which lies approximately 1 km off the coast of the Nishisonogi Peninsula in Nagasaki Prefecture. There is no general hospital on the island, nor is there any connecting bridge, so we started providing space for a heliport on company property in 2007. This provided access to an emergency and critical care center by air ambulance not only to our employees, but also to island residents. Every year since then, we have worked together with island residents on clearing weeds from around the heliport, and we will continue this activity in the future as a member of the local community.

Participants did a thorough job of clearing away weeds

Kanagawa | Workshops for local junior high schools

In the J-POWER Group's Chigasaki District, we have been holding workshops on request from community elementary schools and junior high schools. We also give tours of the facilities at other power stations and research centers and other related activities to deepen the participants' understanding of J-POWER Group businesses. In combination with that, our members have been making individual efforts to have direct contact with local residents in order to enhance our social quality as a member of the local community.

Explanations are made readily understandable, of course, but they also convey the speaker's feelings about the technology

Nagano | Community mini concerts

We have been holding concerts, mainly of classical music, to express our everyday feelings of gratitude to local residents in areas around our business locations and power plants all across Japan. These concerts were started in 1992 to commemorate the 40th anniversary of the company's founding. Now, in addition to holding the events in large concert halls, we visit schools, social welfare institutions, and other such locations that bring us closer to the community to hold mini concerts, as well. In the 2015 fiscal year, we held the 160th of these events.

Scene of a concert held in the village of Tenryumura

Community Involvement

The corporate activities of the J-POWER Group are supported by power station personnel and other members of local communities. Business sites in each region strive to be good corporate citizens and a useful presence in the community and society so that each employee can be a valued resident of their community. By conducting activities that are trusted and familiar to local residents, the J-POWER Group seeks to live in harmony with communities and grow with society.

Wakayama

Program to deliver supplies to a mountain pilgrimage lodge on the Omine Okugakemichi route of the Kumano pilgrimage routes, a World Heritage site

At the Hashimoto Transmission Line Maintenance Office in Wakayama Prefecture, we have been implementing a twice-yearly program since 2002 of transporting food supplies to a mountain lodge for pilgrims on the Omine Okugakemichi, which is one of the routes for Shugendo practitioners on the Kumano pilgrimage routes. The J-POWER Kumano Trunk Line (a transmission line) runs parallel to the Omine Okugakemichi route. We use part of that route for maintenance access, so we have been continuing this program out of the desire to be of even some help to Shugendo practitioners and mountain climbers who travel that way.

Heading for the mountain pilgrimage lodge, stepping with care on a path lightly covered with snow

Nagasaki

Matsuura Navy Festival

Matsuura Thermal Power Station is located in the city of Matsuura, Nagasaki Prefecture, which was the birthplace of the Matsura-to, a warrior band that earned fame leading a powerful naval force against invading Mongols. The Matsuura Navy Festival is a major event that highlights the distinctive characteristics of Matsuura City, and volunteers from the Matsuura District of the J-POWER Group took part in the mass festival dancing that all the citizens join in. The community as a whole enjoys the Matsuura Navy Festival together, and we will make every effort to sustain our good relationship with the people of this community.

Doing very well in holding the vigorously outstretched arm pose in unison

Harmonizing Energy Supply with the Environment

In order for people to lead enriching lives, both energy, which supports enriching lives, and a better environment are needed. Leveraging environmental knowledge acquired through our business activities to date, we partner with people seeking to harmonize energy supply with the environment and conduct activities to raise awareness and develop technologies for energy and the environment in an effort to facilitate the sustainable development of Japan and the rest of the world.

Fukui

10-Day Campaign for Getting to Know the Forests and Lakes

The J-POWER Group Kuzuryu District holds tours of its facilities during the 10-Day Campaign for Getting to Know the Forests and Lakes that is held by the Forestry Agency and the Ministry of Land, Infrastructure, Transport and Tourism. The participants were fascinated to see the place where energy is made, where they are usually not able to enter. We explained things clearly, and also did other things, such as handing out dam cards, to make us feel more approachable.

The children who took part were given a thorough explanation of how electricity generation works

For the Benefit of Broader Society

The J-POWER Group undertakes social contribution initiatives not just for the benefit of local communities, but also for the benefit of broader society and each region of the world where it operates. Described below are some of the measures taken to support the future generations that will create the society of tomorrow. In addition to these programs, we will continue cooperating with volunteer activities targeting disaster areas including areas struck by the Great East Japan Earthquake as well as children suffering from malnutrition in various parts of the world, providing work training at power plants in Asia and support to persons affected by flooding.

Personnel Office — Internships

J-POWER, JPHYTEC Co., Ltd., and Jpec Co., Ltd. offered summer internships to science students in graduate school, university, or technical college. The internships provide experience in certain operations at power stations and other facilities with the aim of helping the interns' studies and support them in making future occupation choices. In FY 2015, 36 interns from various areas of Japan took up the challenge of practical training in the maintenance and operation of electric power facilities.

First-hand experience of accident handling simulation

Public Relation Department — Experimental Learning Project for Ecology and Energy Thermal power session tour of Isogo for university students

The Experimental Learning Project for Ecology and Energy is a J-POWER Group measure to contribute to society according to our aim of "Harmonizing energy supply with the environment." At Isogo Thermal Power Station, which is sited in Isogo Ward of Yokohama City, Kanagawa Prefecture, we held an experiential energy and environment educational program for university students on their spring break between school years. There were 33 university student participants from 25 universities located all around Japan. The students naturally gained detailed knowledge about thermal power generation and energy, but their dialogues with responsible working members of society also gave the students new awareness, and they were able to establish connections among each other, as well.

Participants hear explanations from employees who actually work in the power plant

VOICE — We Participated in the Experimental Learning Project for Ecology and Energy!

On this tour, I was able to learn many things that I couldn't learn just by studying at a university. For instance, about CO_2 reductions that Japan has to make under international agreements, what has to be done at power plants for that purpose, how the type of power plant makes a difference in how many jobs are created, what the best energy mix might be for Japan's overall benefit as a nation from a comprehensive perspective, and what national policies should be adopted for that purpose. I thought about these and other such things relating to the optimal use of energy, the future of energy, and so on. As to the answers to these questions, that is something I will want to look for, but the energy problem really has a large variety of different factors involved, and this made me feel that I want to increase the breadth and depth of my knowledge.

University of Tsukuba
Masato Funahashi

Environmental Management

Based on its corporate principle of achieving harmony between energy and the environment, the J-POWER Group undertakes environmental management intended out, we undertake various measures pursuant to the J-POWER Group Environmental Management Vision, a statement of internal and external Group initiatives, and laws, regulations, and agreements from the perspective of ensuring transparency and trust.

Corporate Target and FY 2015 Results

The Action Programs for the J-POWER Group Environmental Management Vision define Corporate Targets*, which are mid-term targets that the Group as a whole

* In addition to Group-wide Corporate Targets, business divisions and affiliates formulate their own targets tailored to their operations.

	Item	Target			
Efforts Relating to Global Environmental Issues	Reducing CO_2 Emissions from Power Generation and Promoting Technological Development	As an electric utility, in addition to continuing to contribute to the Environmental Action Plan by the Japanese Electric Utility Industry, looking towards 2020 we are working to provide a stable supply of energy and reduce CO_2 emissions in Japan and overseas by promoting the following measures.			
		● Work to replace aging coal-fired power stations with new facilities with higher efficiency at the world's highest levels.			
		● Promote mixed combustion of biomass fuels in coal-fired power stations (Effective exploitation of untapped resources).			
		● Contribute to the reduction of CO_2 emissions and technology transfer on a global scale by promoting the overseas expansion of coal-fired power using J-POWER's advanced, high-efficiency power generation technologies, in particular in the Asian region.			
		● Promote the development of higher-efficiency oxygen-blown integrated coal gasification combined-cycle (IGCC) technology through the realization of the Osaki CoolGen Project. In addition, we are taking the results from trial operations under the EAGLE Project and the Callide Oxyfuel Combustion Project in Australia into consideration in our promotion of research and development on CO_2 capture and storage (CCS) technology.			
		● In relation to the Ohma Nuclear Power Plant Plan, we will respond appropriately to the assessment for conformance with new safety standards that we applied for in December 2014. We will do our utmost to ensure the construction of a safe and trusted nuclear facility, taking the accident at the Fukushima Daiichi Nuclear Power Station into serious consideration, going forward with voluntary safety measures and other such steps, and at the same time maintaining the approval of residents of the region in which the station is located.			
		● Build new hydroelectric power facilities, expand, upgrade and replace existing facilities, and expand the use of hydroelectric power.			
		● Significantly expand domestic wind power facilities and advance research and development towards the realization of ocean-based wind power generation technologies.			
		● Work to develop new geothermal power sites in Japan.			
	Item	**Target**	**Target base-year performance, etc.**	**FY 2014 performance**	
	● **Total thermal energy efficiency (HHV, at generation point)**	Maintain current level [about 40%]	FY 2008 40.1% (Reference: LHV*1=41.1%)	40.3% (Reference: LHV = 41.4%)	
	● **Reduce SF_6 emissions; increase recovery rate during inspection and retirement of equipment**	Inspection: at least 97%; Retirement: at least 99%	FY 2008 Inspection: 99% Retirement: 99%	Inspection: 99% Retirement: 99%	
Efforts Relating to Local Environmental Issues	● **Reduce SOx emissions per unit of electric power generated (point of generation, thermal power stations)**	Maintain current level [about 0.2 g/kWh]	FY 2008 0.20g/kWh	0.17 g/kWh	
	● **Reduce NOx emissions per unit of electric power generated (point of generation, thermal power stations)**	Maintain current level [about 0.5 g/kWh]	FY 2008 0.50g/kWh	0.51 g/kWh	
	● **Increase recycling rate for industrial waste**	Maintain current level [about 97%]	—	99%*2	
	● **Protection of the Water Environment**	Consider protection of river and ocean environments in business activities	—	Practices of consideration for protection of river and ocean environments	
	● **Protect biological diversity**	Consider the protection of biological diversity in relation to business activities	—	Efforts to Preserve Biodiversity	
Ensuring Transparency and Reliability	● **Improvement of Environmental Management Level**	Continuous improvement of EMSs	—	Consistent use of PDCA cycle	

to achieve improvements in both environmental considerations and economic value so that it can contribute to the development of a sustainable society. To carry this strive to enhance the disclosure of information relating to environmental programs and environmental management levels while maintaining strict compliance with

is expected to work towards. As shown below, all of the items included in the Corporate Targets for FY 2015 were achieved.

	Main results for FY 2015	
	● Construction work proceeded under the Takehara Thermal Power Station Replacement Project. Environmental impact assessment procedures for the Takasago Thermal Power Station Replacement Project were started.	
	● Mixed combustion according to target fuels was conducted at Matsuura Thermal Power Station, Takehara Thermal Power Station and Takasago Thermal Power Station.	
	● Preparatory measures for construction work conducted for the Central Java Project in Indonesia.	
	● The Osaki CoolGen Project is making progress in construction and trial operation of a power plant intended for trials of oxygen-blown IGCC (first phase). We are also making preparations with a view to initiating trials of CO_2 separation and capture IGCC (second phase).	
	● For the Ohma Nuclear Power Plant Plan, we are making progress in examining measures to reinforce safety and related matters, and an assessment of conformance with new regulatory standards is underway. All in all, we are implementing initiatives to obtain the trust and understanding of the local community.	
	● To expand the use of hydroelectric power, operation of Kuttari Power Station was started. As to Konokitani Power Station, work on construction is advancing.	
	● With regard to land-based wind power, construction of wind power stations on the Yurihonjo Coast has begun. Also, we conducted trials of offshore wind power off the coast near Kitakyushu (a joint project with NEDO) as well as other activities.	
	● Environmental impact assessment procedures regarding the Wasabizawa Geothermal Power Station have been completed and construction to develop this as a new domestic geothermal power plant site has started.	

	FY 2015 performance	Fiscal 2015 Evaluation and Next Steps	Page Reference
	★ 40.4% (Reference: LHV = 41.5%)	● The J-POWER Group met its target for total thermal energy efficiency thanks to efforts to maintain high-efficiency operation in existing thermal power stations and to adopt high-efficiency technologies when upgrading facilities.	P50
	★ Inspection: 99% Retirement: 99%	● The FY 2015 target was met, with a recovery rate of 99% during inspections and 99% at retirement, thanks to efforts to curb emissions during equipment inspection through careful and consistent recovery and reuse. We will continue to stress careful and consistent recovery and reuse to curb atmospheric emissions of SF_6 from gas insulation equipment.	P49
	★ 0.18 g/kWh	● Efforts including the application of fuel control and the appropriate operation of flue gas desulfurization systems saw us curb our SOx emissions and achieve our target for emissions per unit of power generated. We will continue our efforts to curb emissions through good management practices.	P42
	★ 0.50 g/kWh	● Efforts including the application of fuel control and the appropriate operation of flue gas denitrification systems saw us curb our NOx emissions and realize our emissions target per unit of power generated. We will continue our efforts to curb emissions through good management practices.	P42
	★ 99%*2	● We achieved our targets for the fiscal year through efforts to promote the recycling of coal ash and to reduce industrial waste generated by the maintenance and operation of power stations. We will go on working to maintain this level.	P50
	Practices of consideration for protection of river and ocean environments	● When operating power generation facilities that involve rivers, we implemented measures for protection of the river environment according to the conditions at each location, sedimentation control measures and measures to mitigate the long-term persistence of turbidity. ● When operating power generation facilities adjacent to the ocean, we exercised precise control over the discharge of wastewater in compliance with environmental protection agreements and other such arrangements.	P43
	Efforts to Preserve Biodiversity	● We showed consideration for the protection of ecosystems and the diversity of species in conducting our business activities and worked to protect rare animal and plant species and their habitats.	P43
	Consistent use of PDCA cycle	● The PDCA cycle was implemented consistently and measures were taken to raise the level of environmental management through.	P44

*1: LHV (lower heating value) estimated from actual HHV (higher heating value) using conversion coefficients supplied in the Agency of Natural Resources and Energy's Comprehensive Energy Statistics (FY 2004 edition). *2: Sulfur excluded

Business Activities and the Environment

The charts below detail the resource consumption and environmental load of the FY 2015 J-POWER Group operations within Japan.

Note: The scope of applicability will include J-POWER and its 25 consolidated domestic subsidiaries, such as electric power businesses and ancillary businesses related to electric power. The amounts attributed to consolidated subsidiaries are based on percentages corresponding to J-POWER's equity share.

INPUT

Thermal Power Generation ★

Fuel

- Coal (wet) ····· 21.74 million tons
- Heavy oil ····· 45,000 kl
- Light oil ····· 22,000 kl
- Natural gas ····· 115.8 million Nm^3
- Biomass ····· 29,000 tons

Industrial-use water ····· 9.22 million m^3

Notes:
1. Apart from waste water, almost all industrial-use water used in thermal power stations is released into the atmosphere as steam.
2. River water used in hydroelectric power stations is not included in the input figures, as all such water is returned to the river after power generation.
3. While steam is used in geothermal power stations, hot water is returned underground after power generation via an injection well.

Major Chemicals Consumed (undiluted equivalents)

- Limestone ($CaCO_3$) ····· 210,000 tons
- Ammonia (NH_3) ····· 15,000 tons

Hydroelectric power ★

Power for pumped storage ····· 600 GWh

Geothermal Power ★

- Steam ····· 0.33 million tons
- Hot water ····· 1.88 million tons

Internal Use at Business Sites and Offices ★

Electricity (purchased)

- Business sites ····· 41.63 GWh
- Offices ····· 15.60 GWh

Fuel (gasoline equivalent)

- Business sites ····· 7,971 kl
- Offices ····· 1,198 kl

Drinking water

- Business sites ····· 66,000 m^3
- Offices ····· 216,000 m^3

Copy paper (A4 equivalent) ····· 55 million sheets

Business Activities

Electric Power Generated ★

Thermal **59,900** GWh

Hydroelectric **11,000** GWh

Geothermal/Wind **800** GWh

Auxiliary power for operation and transmission loss
4,500 GWh

Volume of electric power sold
Total **67,200** GWh

Supply

• Sums of figures may not equal totals in some cases due to rounding.

The electricity generated at our power stations is supplied through regional power companies to end users throughout Japan. The 67,200 GWh of wholesale electric power we sold last year is equivalent to approximately 8% of total electric power sold by regional power companies.*

* Total electric power sold in FY 2015 was 797,100 GWh, according to confirmed figures on electricity demand published by the Federation of Electric Power Companies of Japan.

Major Resources Recycled ★

- Coal ash ····· 1.839 million tons (99.3%)
- Sludge ····· 10,000 tons (63.8%) (excluding gypsum)
- Gypsum ····· 318,000 tons (100.0%) (desulfurization byproduct)
- Sulfuric acid ····· 25,000 tons (100%) (desulfurization byproduct)
- Other industrial waste ····· 45,000 tons (76.8%)
- Waste paper ····· 330 tons (91.2%)
- Driftwood from dam reservoirs ···· 27,000 m^3 (79.4%)

Percentages indicate recycling rate.

Effective Utilization (cement plants, etc.)

OUTPUT

Thermal Power Stations ★

Emissions into the Atmosphere

- CO_2 ····· 48.20 million t-CO_2
- SOx ····· 11,000 tons
- NOx ····· 30,000 tons
- Soot and dust ····· 1,000 tons

Emissions into Bodies of Water

- Waste water ····· 3.72 million m^3
- Waste water COD ····· 15 tons

Geothermal Power Station ★

Hot water ····· 1.97 million tons

CO_2 Emissions from Business-Site and Office Activities ★

- Business sites ····· 42,000 t-CO_2
- Offices ····· 11,000 t-CO_2

Waste ★

Industrial waste

- Coal ash ····· 13,000 tons
- Other ····· 20,000 tons

Specially controlled industrial waste

- Specially controlled industrial waste ····· 200 tons

Non-industrial waste

- Waste paper ····· 32 tons
- Driftwood from dam reservoirs ····· 7,100 m^3

Proper Management and Disposal of Waste Material and Chemical Substances

Waste

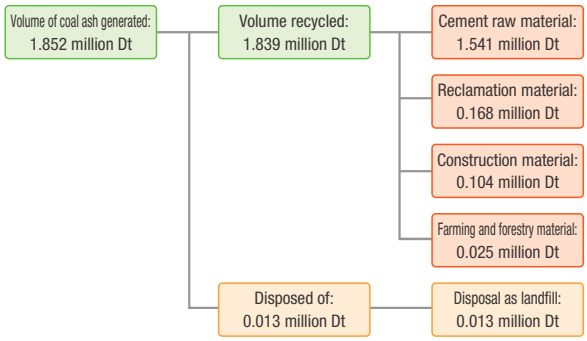
Reduction and Effective Utilization of Waste

The J-POWER Group has set the industrial waste recycle rate of 97% as a Corporate Target. The total amount of industrial waste we generated in fiscal 2015 was 2.25 million tons, and we achieved a recycle rate of 99%.

Making Effective Use of Coal Ash and Gypsum

The J-POWER Group's industrial waste consists of 97% coal ash and gypsum from thermal power stations.

Breakdown of the Coal Ash Recycle (displacement tons) ★



• Sums of figures may not equal totals in some cases due to rounding.

Information on Maintenance and Management of Industrial Waste Final Disposal Sites

The J-POWER Group discloses on its website its maintenance and management plan for waste final disposal sites, the results of groundwater and discharge water quality analyses, inspection results, the volume of landfill waste, and other maintenance and management information.

Chemical Substances

Management of Chemical Substances

The J-POWER Group complies with applicable laws and regulations and properly and rigorously uses, stores, controls, and treats chemical substances regulated by the PRTR Law that are used in electric power generation or are included in equipment or machinery, dioxins, PCB waste material (including equipment that contains trace amounts of PCB), and materials that contain asbestos and other substances.

PRTR Substance Release and Transfer Volumes (FY 2015) ★

Substance	Use	Volume handled	Volume released	Volume transferred as waste
33: Asbestos	Insulation for equipment	11.31 t/y	—	11,131 kg/y
71 : Ferric chloride	Wastewater treatment agents	14.80 t/y	—	14,800 kg/y
80 : Xylene	Coating for machinery	3.82 t/y	3,819 kg/y	—
300: Toluene	Fuel for power generation (coal)	18.58 t/y	18,576 kg/y	
405 : Boron compounds	Manure additives	13.62 t/y	0.4 kg/y	—

Note:
Figures represent total release and transfer volumes for all business sites handling 1 ton or more per year of a Class 1 designated chemical substance or 0.5 ton or more per year of a Specific Class 1 designated chemical substance.

VOICE Engaging in environmental protection activities as a member of the community

Takasago Thermal Power Station is a very old facility that started operation in 1968 in the Harima Coastal Industrial Zone, which is located on the Harima Plain in south-central Hyogo Prefecture. The Seto Inland Sea that spreads out before it is a famous scenic location offering beautiful natural views as well as a treasure house of fishery resources that has been used since ancient times. Around 1965, however, when this power station was entering operation, the waters of the Seto Inland Sea were so seriously polluted that people called it the Dead Sea. Therefore a variety of measures have been implemented, including water use regulations, to restore the Seto Inland Sea to its original state. Ever since this power station started operating, we have also been taking corresponding action, for instance by introducing the latest equipment for environmental measures as the occasion arose. The measures taken by the entire region acting together as one did manage to improve the water quality, but new problems have emerged, such as declining fish catches. In future, therefore, the aim of these measures will shift to restoring the bounty of the sea. At this power station, too, we are proceeding with plans to upgrade to the latest equipment in order to realize the aim of "Harmonizing energy supply with the environment" at higher levels.

In future, we will continue to make use of the experience we have accumulated over our many years in this area, and go on engaging in environmental protection activities as a member of the local community.

Takasago Thermal Power Station
Siting & Environment Group and Planning & Administration Group
Takashi Sakamoto

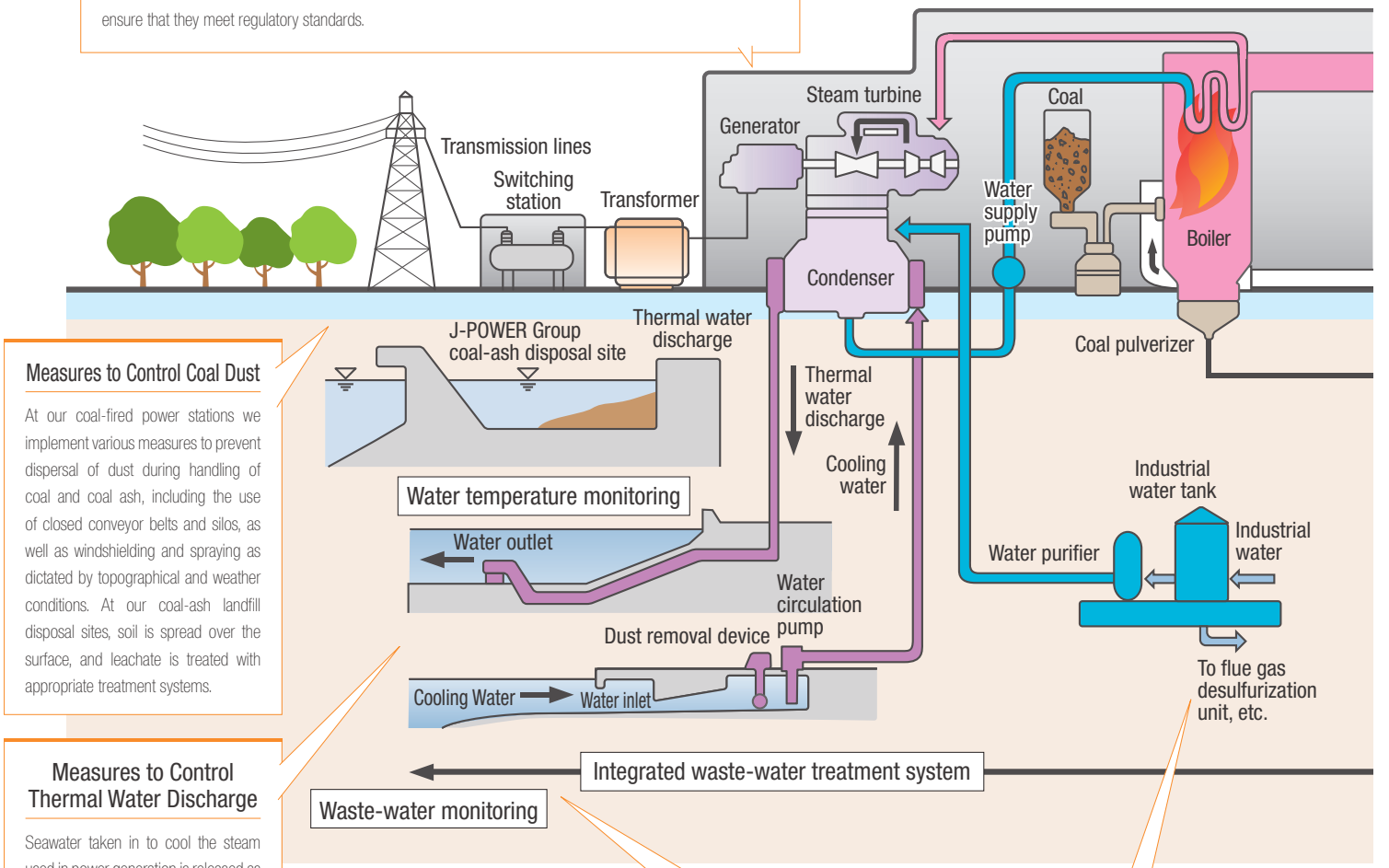
Initiatives for Environmental Preservation

The J-POWER Group undertakes environmental preservation initiatives using the latest technologies and knowledge to reduce the environmental impacts caused by its domestic and overseas electric power businesses.

Environmental Measures at Coal-Fired Power

Measures to Control Noise and Vibration

We work to prevent noise and vibration pollution by keeping such noise- and vibration-emitting equipment as boilers, turbines, and exhaust fans inside buildings. For outdoor equipment, we install soundproof covers and sound barriers as needed. Noise and vibration levels are periodically measured at the boundaries of our sites to ensure that they meet regulatory standards.



Measures to Control Coal Dust

At our coal-fired power stations we implement various measures to prevent dispersal of dust during handling of coal and coal ash, including the use of closed conveyor belts and silos, as well as windshielding and spraying as dictated by topographical and weather conditions. At our coal-ash landfill disposal sites, soil is spread over the surface, and leachate is treated with appropriate treatment systems.

Measures to Control Thermal Water Discharge

Seawater taken in to cool the steam used in power generation is released as thermal water discharge*. We control intake and discharge properly to reduce their impact on marine life in the vicinity, and monitor the temperature of thermal water discharge on a 24-hour basis to ensure that it remains at or below the reference values established by environmental agreements.

Measures to Prevent Water Pollution

Waste water from such facilities as desulfurization units and offices is appropriately treated in integrated waste-water treatment systems, through coagulation, precipitation, filtration, and so forth. Treated water is routinely monitored by automatic measuring equipment and analyzed periodically to ensure that it meets the standards set under the Water Pollution Control Law and environmental conservation agreements.

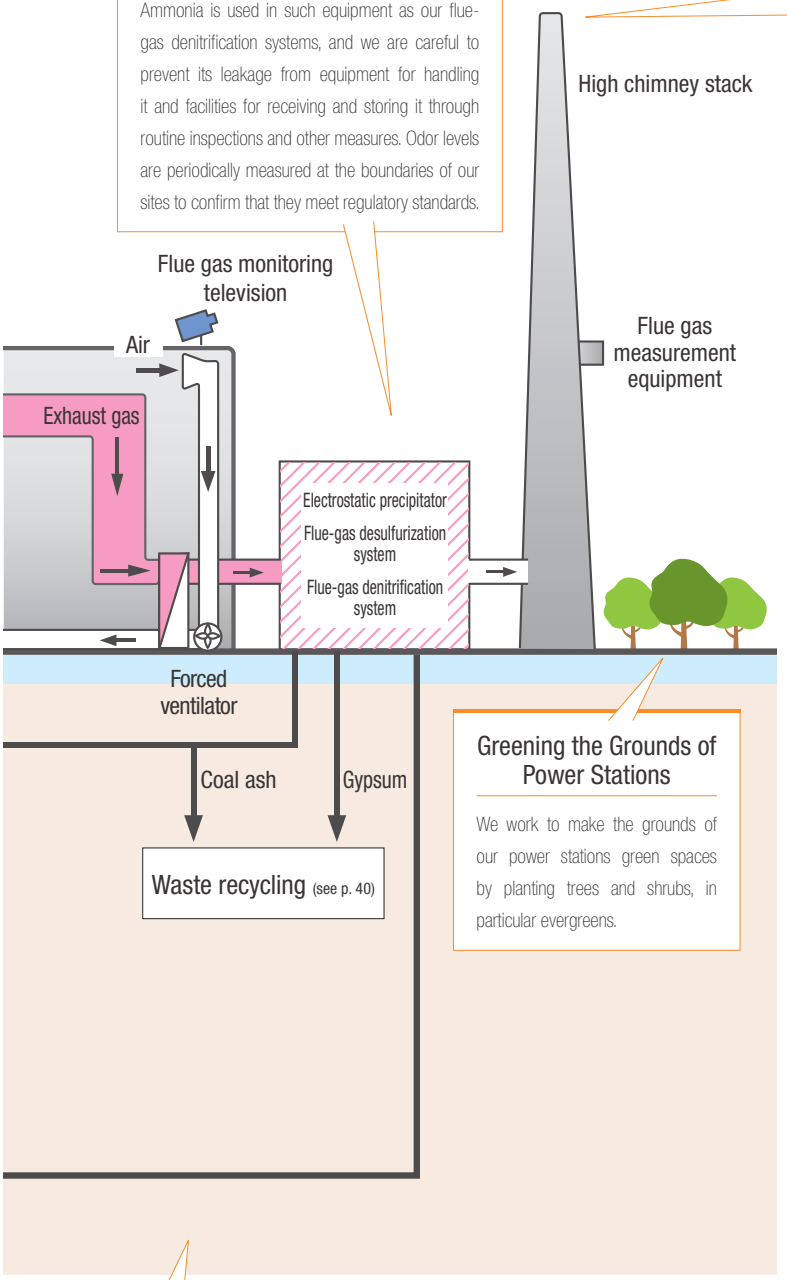
Cutting Back on Industrial Water Use

Industrial water is used in such equipment as boilers, cooling systems, and wet-type desulfurization systems. Part of this water is released into the atmosphere as steam. We are working to reduce our consumption of industrial water through the recovery and reuse, as far as possible, of wastewater that is not released into the atmosphere.

* Thermal water discharge:
In thermal and nuclear power generation, the steam that powers the turbine is cooled and turned to water in a condenser so that it can be used again. In almost all Japanese power stations, seawater is used for cooling in the condensers. As the seawater passes through the condenser, its temperature rises. It is then returned to the ocean through the discharge outlet, at which point it is referred to as thermal water discharge.

Measures to Control Odors

Ammonia is used in such equipment as our flue-gas denitrification systems, and we are careful to prevent its leakage from equipment for handling it and facilities for receiving and storing it through routine inspections and other measures. Odor levels are periodically measured at the boundaries of our sites to confirm that they meet regulatory standards.



Measures to Prevent Air Pollution

Combustion of coal and other fuels can generate sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust. To reduce these emissions we have improved our combustion methods and installed such flue gas treatment equipment as desulfurization and denitrification systems and electrostatic precipitators. Although the performance of equipment varies with its date of installation, at each facility we have installed the newest technology available at the time to remove pollutants with maximum efficiency. This equipment operates automatically with the aid of measurement devices that continuously monitor the content of flue gas. In addition, human operators monitor the equipment 24 hours a day and are able to mount a swift response in the event of any malfunction, ensuring that our emissions do not exceed the benchmark figures specified by the Air Pollution Control Act and environmental protection agreements.

Our performance for the 2015 fiscal year in SOx, NOx, and soot and dust emissions is shown in the below table. The figures obtained are quite low by comparison with other countries.

FY 2015 SOx, NOx, and soot and dust emissions performance ★

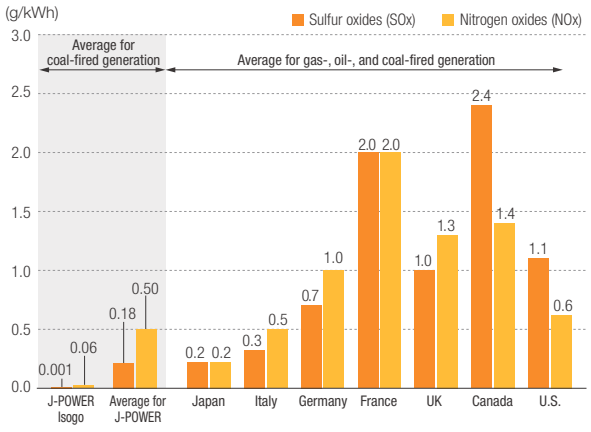
Substance	Emissions	Emissions intensity
SOx	10,700 tons	0.18 g/kWh
NOx	29,800 tons	0.50 g/kWh
Soot and dust	800 tons	0.01 g/kWh

Notes:
1. Emissions intensity: Emissions per unit of electricity generated at thermal power stations.
2. Emissions of soot and dust are calculated on the basis of measurements taken monthly.

Greening the Grounds of Power Stations

We work to make the grounds of our power stations green spaces by planting trees and shrubs, in particular evergreens.

International Comparison of SOx and NOx Emissions Intensity for Thermal Generation



Overseas: Emissions volume: OECD StatExtracts
Volume of power generated: IEA Energy Balances of OECD Countries 2014 Edition
Japan: Materials published by The Federation of Electric Power Companies of Japan (10 electric power company and J-POWER)
Figures for Isogo and J-POWER are formulated from results for 2015

Measures to Prevent Soil Pollution

From FY 2004 through FY 2006, we conducted studies at all J-POWER Group domestic sites and determined that they were free of soil or groundwater contamination. We will continue working diligently to ensure that no soil pollution occurs.

Measures to Prevent Oil Leaks

We implement various measures to prevent the leakage and dispersion of fuel oil, lubricating oil, and other such substances within power station grounds, to include keeping adsorbent materials constantly ready in our power stations.

Preservation of the Natural Environment

Environmental Impact Assessment

Before expanding power plant facilities, we conduct environmental impact assessments in accordance with applicable laws and regulations and adequately take the environment into consideration while listening to the opinions of local residents during the planning stages. After a power plant becomes operational, we take environmental preservation measures based on the results of monitoring performed pursuant to environmental preservation agreements entered into with relevant local governments.

Environmental Impact Assessments conducted in the 2015 fiscal year
(Projects conducted after submission of an environmental impact assessment report are included)

Project	Operator	Implementation area	Implementation status
The No.1 and 2 units renewal project at Takasago Thermal Power Station	J-POWER	Takasago City, Hyogo Prefecture	Environmental impact assessment report review completed (as of July 2015)
The No.1 unit renewal project at Onikobe Geothermal Power Station	J-POWER	Osaki City, Miyagi Prefecture	Planning stage environmental impact statement under review (as of July 2016)
The new No.2 unit installation project at Kashima Thermal Power Station	Kashima Power Co., Ltd.	Kashima City, Ibaraki Prefecture	Environmental impact assessment undergoing inspection (as of July 2016)
The new No.1 and No.2 units installation project at Nishi-Okinoyama Thermal Power Station	Yamaguchi-Ube Power Co., Ltd.	Ube City, Yamaguchi Prefecture	Environmental impact assessment report review completed (as of April 2016)
Setana Osato Wind Power Farm Project	J-Wind SETANA Co., Ltd.	Setana-cho, Kudo-gun, Hokkaido	Environmental impact assessment procedure completed (as of July 2015) November 2015 Preparatory construction work started
Shin-nikaho Wind Farm Project (provisional name)	J-POWER	Nikaho City, Akita Prefecture	Environmental impact assessment procedure completed (as of April 2016) April 2017 Construction work on main unit scheduled to start
Shin-kuzumaki Wind Farm Project and Kuzumaki Wind Farm Project (provisional name)	J-Wind KUZUMAKI Co., Ltd.	Kuzumaki -machi, Iwate-gun, Iwate Prefecture Iwaizumi-cho, Shimohei-gun, Iwate Prefecture	Environmental impact assessment procedure completed (as of January 2016) April 2017 Construction work on main unit scheduled to start
Minami Ehime No. 2 Wind Farm Project	J-POWER	Uwajima City, Ehime Prefecture	Environmental impact assessment report review completed (as of January 2016)

Preservation of the Water Environment

In FY 2013, the J-POWER Group made preservation of the water environment a corporate target for its environmental management vision with the aim of reinforcing its environmental preservation initiatives regarding rivers and the seas.

We undertake environmental preservation measures based on the specific regional environment and characteristics of each business site such as taking measures to maintain water quality and prevent the accumulation of silt in dam lakes and downstream areas in the case of hydroelectric power station, and managing the discharge of wastewater into nearby bodies of water in accordance with applicable laws and regulations in the case of thermal power stations.

Forest Conservation

J-POWER owns approximately 4,600 hectares of forests in the areas near its hydroelectric power facilities located throughout Japan. We appropriately maintain these valuable forests in accordance with the J-POWER Group Forest Protection Guidelines (formulated in 2007).

Japan's forests are falling into ruin because of inadequate management caused by slumping forestry markets, but the J-POWER Group is contributing to forest conservation and reduction of CO_2 emissions through efforts to burn biomass fuel pellets made from forestry offcuts and other materials in coal-fired power stations along with coal (see p. 20).

Preserving Biodiversity

To reinforce its measures in light of the Basic Law on Biodiversity, in FY 2011, the J-POWER Group made preserving biodiversity a corporate target for its environmental management vision.

During the power generation facility planning and design stages, we implement environmental preservation measures taking into consideration the impact on the natural environment and ecological systems based on the results of wildlife and ecological assessments in the land and ocean areas surrounding the facility. We strive to preserve wildlife, particularly rare species, living in the vicinity of operating power plants and other facilities and their habitats.

These measures are tailored to local environments and characteristics such as making every effort to avoid outdoor work during the nesting season of the Japanese golden eagle and other endangered birds in the vicinity of the Okutadami Dam and Otori Dam and restoring, maintaining, and managing wetlands that became landfill areas when the Okutadami Dam in Niigata Prefecture was expanded.

An observation group in the Hassaki wetland, downstream from Okutadami Dam (Niigata Prefecture)

Ensuring Transparency and Reliability

The J-POWER Group conducts environmental preservation activities in accordance with corporate principles, and the introduction of environmental management systems (EMS) at all J-POWER business sites was completed in 2002. The introduction of EMS at J-POWER subsidiaries and affiliates and at subsequently established business sites is also proceeding, and we are continuing our efforts to enhance environmental preservation measures.

Improvement of Environmental Management Level

On the basis of the J-POWER Group Environmental Action Guidelines, reviewed annually by management, each J-POWER Group draws up its own Environmental Action Plan. They periodically review and evaluate their initiatives and revise the measures to be taken, following the PDCA cycle.

Raising Employee Awareness of Environmental Problems

The J-POWER Group puts efforts into environmental training for employees to deepen their awareness of environmental issues and instill a sense of personal responsibility.

In-House Environmental Training, FY 2015

Media	Type	Training category	Results	Main content for ensuring strict compliance with environmental laws and regulations
General	Environmental management in general	Environmental management briefing	Approximately 629 persons	Information regarding group environmental management initiatives and amendment of environmental laws and regulations
		Lecture presentations on the environment	Approximately 100 persons	An outside lecturer was invited to talk on the topic of “oceans”
	E-learning	Basic knowledge regarding environmental issues	87.3%	Acquiring basic knowledge regarding environmental issues
Advanced and specialized training	EMS implementation	Internal environmental auditor training	43 persons	Intended to foster auditors with the knowledge necessary to conduct internal audits under the EMS
		Follow-up training for internal environmental auditors	25 persons	Intended to foster human resources who can oversee audit teams conducting internal audits under the EMS
	Environmental laws and regulations	Skill enhancement training for waste-processing operations	56 persons	Explanation of the key points of the Waste Disposal Law
		Waste-processing risk assessment	Four locations	Checking provisions of agreements and manifests specified by law
		Training on environmental laws and regulations	121 persons	Explanation of environmental laws and regulations
	E-learning	EMS course	Continuously conducted	Basic knowledge on the EMS

Full Compliance with Laws, Regulations, Agreements, and other Rules

In order to reduce the impact on the surrounding environment due to business activities, we take appropriate steps to implement the laws, regulations, agreements, and other such rules applicable to our business activities and make them widely known. We are also engaged in ongoing efforts to improve our facilities and operations.

In order to dispose of waste properly, we take measures to maintain and improve the disposal capabilities of waste disposal operators and other personnel involved, and we employ waste disposal consulting firms to directly confirm the status of waste disposal by local organizations.

Responding to Environmental Problems

We make every effort to prevent environmental problems before they occur. When problems arise that require emergency handling, however, we promptly take whatever measures are required to contain the damage and we notify the local agencies concerned as well as the J-POWER Headquarters Emergency Response Team and departments.

The J-POWER Headquarters Emergency Response Team promptly notifies top management and, in the interest of information disclosure, provides information on the emergency to the media and other interested parties for publication. We also devise measures to prevent recurrence of the problem. Of the incidents impacting the environment that occurred within the J-POWER Group in FY 2015, one incident was reported by the mass media.

Status of Environmental Incidents

Location	Situation and Countermeasures
Ishikawa Coal Thermal Power Station No. 1 Unit (Uruma City, Okinawa Prefecture)	On April 22, 2015, the condenser interior and the collector vessel for sponge balls used to clean the narrow pipes in the condenser were checked for obstructions by feeding in sponge balls made of natural rubber, and due to a malfunction of the ball collector vessel, sponge balls were washed out into the ocean. The sponge balls that had been washed out were recovered, a screen to prevent balls being washed into the ocean was newly installed on the downstream side of the ball collector vessel, and measures are being taken to prevent recurrence.

Environmental Accounting/Eco-Efficiency

Environmental Accounting

To calculate the costs and benefits of the J-POWER Group's environmental conservation activities in FY 2015 in keeping with the nature of our business, we referred to the Environmental Accounting Guidelines 2005 issued by the Ministry of the Environment.

Environmental Conservation Cost and Benefit

Total costs for FY 2015 were approximately 46.3 billion yen, with pollution control costs for preventing contamination of the air, water, etc., accounting for about 42% of the total.

Environmental Conservation Cost

(unit: billion yen)

Category	Main measures and efforts	Cost
Pollution control	Air pollution control (desulfurization/denitrification, soot and dust treatment), water pollution control (wastewater treatment), etc.	19.3
Global environmental conservation	Measures to reduce greenhouse gas emissions (maintaining high-efficiency operation of coal-fired power stations, developing renewable and unutilized energy sources, maintenance costs for energy-saving equipment, emission control of greenhouse gases other than CO_2)	1.8
Resource recycling	Waste reduction through reuse and recycling; treatment and disposal of waste	18.4
Management activities	Monitoring and measurement of environmental load, labor costs for environmental conservation organizations, costs for environmental education, etc.	2.4
Research and development	High-efficiency power generation, use of fuel cells, CO_2 capture and fixation, recycling of coal ash and gypsum, etc.	0.5
Social activities	Tree-planting, environmental advertising, environmental beautification, membership in environmental groups, preparation of sustainability report, etc.	1.9
International projects	Overseas cooperation projects for environmental conservation technologies	0.4
Other	Pollution load levy	1.6
Total		46.3

Note: Sums of figures may not equal totals in some cases due to rounding.

Environmental conservation benefit

Environmental conservation benefit	FY 2015
SOx emissions intensity (g/kWh)	0.18
NOx emissions intensity (g/kWh)	0.50
Soot and dust emissions intensity (g/kWh)	0.01
CO_2 emissions intensity (kg-CO_2/kWh)	0.72
Average coal-fired power efficiency (%)	40.4
Coal ash recycling rate (%)	99.3
Industrial waste recycling rate (%)	99
Gypsum recycling rate (%)	100
Volume of driftwood recycled (1,000 m³)	27
Employees completing internal environmental auditor training	68
Sustainability report (copies published)	6,000
Overseas consulting projects (cumulative total)	355

* Note: For detailed data on each item, see pp. 49-50, Environment-Related Data.

When considering environmental load, the nature of our business requires that instead of tabulating total emissions, we assess the overall environmental conservation benefit of our conservation measures on the basis of emissions intensity, thermal efficiency, and reuse/recycling rate.

Economic Benefit

Efforts contributing to earnings and cost reductions were calculated to have had an economic benefit of approximately 11.1 billion yen.

Economic Benefits

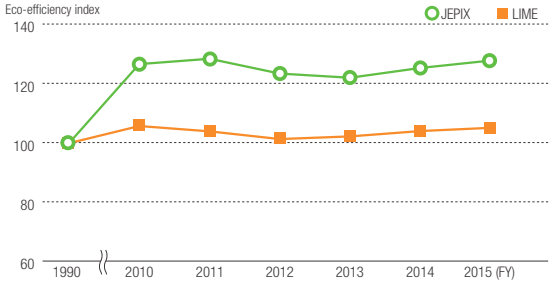
(unit: billion yen)

Category	Details of main measures and initiatives	Benefit
Revenue	Sales of marketable commodities from coal ash, gypsum, and sulfuric acid	0.5
Cost reduction	Reduction in fuel costs due to improved coal-fired power efficiency (introduction of USC)	3.4
	Reduction in disposal costs due to coal ash, gypsum, and sulfuric acid recycling	7.2
Total		11.1

Eco-Efficiency

J-POWER initiatives to date have been evaluated by the JEPIX*1 and LIME*2 methods. These two approaches assign different coefficients to environmental loads (coal, CO_2, SOx, NOx, coal ash), and the resulting recent trends in eco-efficiency are as shown in the graph below.

Integrated Index of Eco-Efficiency (electric power sold per environmental load)



• Note: Eco-efficiency: 100 = FY 1990 integrated index (electric power sold per environmental load).

*1 JEPIX (Japan Environmental Policy Index)
An index that calculates a single score for overall environmental impact using the Ecopoints system, which assigns weights to more than 300 environmental pollutants according to their impact on water and air quality.

*2 LIME (Life-cycle Impact assessment Method based on Endpoint modeling)
An integrated environmental impact assessment method that assigns weights to potentially harmful substances by scientifically analyzing their contribution to such environmental problems as global warming and destruction of the ozone layer and calculating their damage to human health, ecosystems, etc.

Corporate Targets for FY 2016

Efforts Relating to Global Environmental Issues

Item	Target
● Reducing CO_2 Emissions from Power Generation and Promoting Technological Development	As an electric utility, in addition to continuing to contribute to the Environmental Action Plan by the Japanese Electric Utility Industry, looking towards 2020 we are working to provide a stable supply of energy and reduce CO_2 emissions in Japan and overseas by promoting the following measures. • We will replace aging coal-fired power stations with new facilities with higher efficiency at the world's highest levels. • Promote mixed combustion of biomass fuels in coal-fired power stations (Effective exploitation of untapped resources). • Contribute to the reduction of CO_2 emissions and technology transfer on a global scale by promoting the overseas expansion of coal-fired power using J-POWER's advanced, high-efficiency power generation technologies, in particular in the Asian region. • Promote the development of higher-efficiency oxygen-blown integrated coal gasification combined-cycle (IGCC) technology through the implementation of the Osaki CoolGen Project. In addition, advance research and development regarding CO_2 capture and storage (CCS) technologies based on the result of the trail of the EAGLE Project and the Callide Oxyfuel Combustion Project in Australia. • In relation to the Ohma Nuclear Power Plant Plan, respond appropriately to the review of compliance with the new regulatory standards, an application for which was submitted in December 2014. Do our utmost to ensure the construction of a safe and trusted nuclear facility, taking voluntary safety measures based on serious consideration of the accident at the Fukushima Daiichi Nuclear Power Station and obtaining the understanding of residents near the plant site. • Build new hydroelectric power facilities, expand, upgrade and replace existing facilities, and expand the use of hydroelectric power. • Significantly expand domestic wind power facilities and advance research and development towards the realization of ocean-based wind power generation technologies. • Work to develop new geothermal power sites in Japan.
● Maintain/improve thermal efficiency of thermal power stations [HHV (higher heating value)]	Maintain current level [about 40%] (FY 2008 and each FY thereafter)
● Reduce SF_6 emissions; increase recovery rate during inspection and retirement of equipment	Inspection: at least 97%; Retirement: at least 99% (FY 2008 and each FY thereafter)

Efforts Relating to Local Environmental Issues

Item	Target
● Reduce SOx emissions per unit of electric power generated (point of generation, thermal power stations)	Maintain current level [about 0.2 g/kWh] (FY 2008 and each FY thereafter)
● Reduce NOx emissions per unit of electric power generated (point of generation, thermal power stations)	Maintain current level [about 0.5 g/kWh] (FY 2008 and each FY thereafter)
● Increase recycling rate for industrial waste	Maintain current level [about 97%] (FY 2011 and each FY thereafter)
● Protect the water environment	Consider the protection of the river and ocean environment in business activities (FY 2013 and each FY thereafter)
● Protect biological diversity	Consider the protection of biological diversity in relation to business activities (FY 2011 and each FY thereafter)

Ensuring Transparency and Reliability

Item	Target
● Improvement of Environmental Management Level	Continuous improvement of EMSs (FY 2008 and each FY thereafter)

FY 2016 J-POWER Group Environmental Action Guidelines

1. Efforts Relating to Global Environmental Issues

Reducing CO_2 Emissions from Coal-fired Power

- Maintain high-efficiency operation at existing thermal power stations
- Promote biomass mixed combustion in existing thermal power stations
- Implementation of replacement plans for existing thermal power stations
  - The Takehara Thermal Power Station Units No. 1 and 2 and the Takasago Thermal Power Station Units No. 1 and 2 will be replaced with the newest USC plants, greatly increasing efficiency.
- Transfer high-efficiency coal-fired power generation technologies overseas and promote their diffusion
  - Contribute to the reduction of CO_2 emissions and technology transfer on a global scale by promoting the overseas expansion of coal-fired power using J-POWER's advanced, high-efficiency power generation technologies, in particular in the Asian region.

Conducting Research and Development of Next-generation Low-carbon Technologies

- Proceed with large-scale proving trials of oxygen-blown integrated coal gasification combined-cycle (IGCC)
  - Proceed with the Osaki CoolGen Project to develop high-efficiency IGCC generation technologies.
- Proceed with development of CO_2 capture and storage (CCS) technologies
  - The second phase of the Osaki CoolGen Project is progressing steadily, making use of the results of pre-combustion CO_2 capture technology from the EAGLE Project.
  - Accumulate further technology and knowledge based on the oxygen combustion tests and CO_2 storage tests conducted under the Callide Oxyfuel Combustion Project in Australia.
- Proceed with research and development of ocean-based wind power generation technologies
  - We will promote proving trials of maritime wind power generation systems (in joint research with NEDO) in waters off Kitakyushu City.

Expanding CO_2-free Power Generation Facilities

- Work to realize the Ohma Nuclear Power Plant Plan, with safety as the top priority
  - In relation to the Ohma Nuclear Power Plant Plan, respond appropriately to the review of compliance with the new regulatory standards, an application for which was submitted in December 2014. Do our utmost to ensure the construction of a safe and trusted nuclear facility, taking voluntary safety measures based on serious consideration of the accident at the Fukushima Daiichi Nuclear Power Station and obtaining the understanding of residents near the plant site.
- Expand use of renewable energies
  - Maintain stable operation of existing hydroelectric, geothermal, wind power and recycle power stations.
  - Increase efficiency through upgrades of existing hydroelectric power facilities.
  - Proceed with new hydroelectric, geothermal and wind power developments. Proceed with development towards the significant expansion of power stations, particularly in the case of wind power.
  - Conduct development and support of renewable energy in emerging-market countries.

Other

- Promote energy saving
  - Promote reduction of internal consumption rate at power stations.
  - Take the initiative in energy conservation in the offices throughout the Group in view of the current state of the power supply and demand situation.
    - Promote energy conservation measures in offices with consideration of criteria for judgment stipulated for businesses by the Energy Use Law.
    - Work to conserve energy at our Headquarters towards compliance with the Tokyo Metropolitan Ordinance on Environmental Protection.
  - Reduce environmental load by promoting increased efficiency when transporting raw materials, etc.
  - Reduce environmental load through measures including use of public transportation, increased operation efficiency of company vehicles, and promotion of eco driving.
  - Promote energy and resource-conserving measures in employees' households, such as use of the Household Eco-Account Book.
  - Support measures to promote the spread of energy conservation.
- Utilization and promotion of the offset credit mechanism
- Control release of GHGs other than CO_2
  - Curtail emissions of greenhouse gases other than CO_2 such of SF_6 (sulfur hexafluoride), CFCs (chlorofluorocarbons), HCFCs (hydrochlorofluorocarbons), HFCs (hydrofluorocarbons) and N_2O (nitrous oxide).

2. Efforts Relating to Local Environmental Issues

Reduction of Environmental Load

- Continue to reduce emissions
  - Properly manage waste incineration and environmental equipment in order to control emissions of SOx, NOx, and soot.
  - Properly manage wastewater treatment facilities to control discharges of substances causing water pollution.
  - Properly manage facilities to prevent noise, vibration and odors.
  - Properly manage facilities to prevent pollution of soil and groundwater.
- Strengthen measures to prevent oil spills from equipment, etc. and be prepared so that emergencies can be dealt with in an appropriate and timely manner
- Design and introduce efficient and environmentally friendly station and equipment when constructing or renovating facilities

Promotion of the 3Rs (Reduce, Reuse, and Recycle waste) and Proper Disposal of Waste

- Recycle and reuse recyclable resources and make efforts toward zero emission production
  - Promote reduction of waste from construction, upgrading and demolition work, and reuse and recycling of materials and equipment.
  - Work to reduce quantities used of water, chemicals, lubricating oil, etc.
  - Work to curb volume of office waste (copy paper, etc.) and promote reuse.
  - Rigorously collect and separate paper, bottles, cans, plastic and other waste, and promote reuse and recycling.
- Maintain and continue green purchasing efforts in line with the J-POWER Group Green Purchasing Guidelines
  - Maintain and continue green purchasing of office goods.
  - Maintain and continue the use low-pollution vehicles, etc.
- Properly maintain and manage landfill sites and implement closing procedures

Management of Chemicals

- Fully comply with the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Law)
  - Survey and manage the amounts of chemical substances subject to the PRTR Law that are emitted and transported, notify the appropriate authorities and publish this information.
- Take appropriate measures to deal with dioxins
  - Appropriately manage waste incinerators, and survey and report on exhaust gases and ash in accord with the Act on Special Measures concerning Countermeasures against Dioxin.
  - Observe the stipulations of the Waste Disposal and Public Cleansing Act and the Act on Special Measures concerning Countermeasures against Dioxin when waste incinerators are scrapped.
- Properly manage and dispose PCBs
  - Appropriately store and manage substances based on the stipulations of the Waste Disposal and Public Cleansing Act, the Law concerning Special Measures for Promotion of Proper Treatment of PCB Wastes, the Electricity Business Act, and the Fire Service Act.
  - Progressively treat waste products containing high concentrations of PCBs in accord with the J-POWER Group's Basic Policy for the Treatment of PCBs (based on the government's PCB Wide Area Treatment Plan).
  - Appropriately manage and store waste products containing trace amounts of PCBs, including wiping cloths, tools, etc. with PCBs adhering, until a scheme for the effective and rational treatment of such waste products comes into effect. (Appropriately manage and reduce the risk of PCB leakage in the case of devices still in use containing trace amounts of PCBs.)

- Strive to reduce volumes of hazardous chemicals handled
- Respond appropriately to asbestos-related issues
  - Adopt appropriate measures to prevent the dispersal of asbestos based on the J-POWER Group's Basic Policy concerning Asbestos, while systematically removing asbestos and replacing it with alternative substances.

Measures to Protect the Natural Environment

- Take the natural environment and biodiversity into account in the various stages of business
  - Recognizing that the blessings of the natural environment support a rich and secure lifestyle, conduct surveys, measurements and assessments as necessary of the effect of business activities on the natural environment, and work to protect the natural environment and biological diversity at each stage of the business process, including the planning, design, construction and operation of power stations.
- Consideration for Aquatic Environments
  - In operating power generation facilities that are involved with rivers, we will steadily promote measures for protection of the river environment. These include the implementation of sedimentation control measures according to the conditions at each location and measures to mitigate long-term persistence of turbidity.
  - In operating power generation facilities that adjoin the ocean, we will implement precise control over the discharge of wastewater in compliance with environmental protection agreements and other such arrangements.
- Showing Consideration for Biodiversity
  - We will show consideration for the protection of ecosystems and the diversity of species in conducting our business activities, and we will strive to protect rare animal and plant species and their habitats.
- Implement forest conservation initiatives
  - Institute appropriate protections for company-owned forests based on the J-POWER Group Forest Protection Guidelines.
  - Promote the use of unexploited offcuts in forests.

Environmental Conservation Initiatives in Overseas Projects

- Promote overseas transfer of environmental protection technologies
  - Promote transfer of environmental technologies for thermal and hydroelectric power stations.
- Incorporate environmentally friendly initiatives when formulating development plans and considering investment in projects, and ensure that those initiatives are carried out

Implementation of Accurate Environmental Impact Assessments

- Conduct surveys, measurements and assessments of environmental impact of business activities on the basis of the applicable laws and regulations, reflect the results in the details of business activities, and consider environmental protection.

3. Ensuring Transparency and Reliability

1.Continual Improvement of Environmental Management (Greater Reliability)

Improvement of Environmental Management Level

- Continue to enhance operation of the environmental management system (EMS) at all J-POWER Group companies
  - Assess the actual status of environmental burden and set targets and formulate plans for the protection of the environment.
  - Systematically conduct internal environmental audits and periodically evaluate and improve details of environmental activities in order to meet targets.
  - Take measures to enhance check functions with the aim of maintaining and improving internal environmental audits.
  - Make improvements at business sites that have acquired ISO 14001 certification through their activities.
- Raise employee awareness of environmental issues
  - Systematically conduct education and training programs regarding environmental laws and regulations applicable to business activities.
  - Promote environmental education using e-learning, etc.
- Utilize environmental accounting and eco-efficiency indicators
- Request cooperation of business partners in environmental activities
- Strengthen risk management
  - Work to implement measures to prevent environmentally harmful incidents and ensure essential communication and appropriate responses in an emergency.

Full Compliance with Laws, Regulations, Agreements, and other Rules

- Identify applicable laws, regulations, agreements, and other rules, and work to raise awareness and ensure compliance
  - Accurately identify laws and regulations, agreements, etc. applicable to business activities, and work to respond effectively, educate employees, and ensure appropriate operation and verification.
- Fully comply with environment-related laws, regulations, agreements, and other rules
  - Make precise improvements to equipment and operations in order to prevent pollution of the surrounding environment.
  - Conduct risk diagnoses in relation to waste products and education programs for employees responsible for waste disposal in order to ensure appropriate disposal of waste. In addition, apply the J-POWER Group Guidelines for the Selection of Industrial Waste Disposal Contractors and expand use of electronic manifests.

2.Communication with Society (Greater Transparency)

Publication of Environmental Information

- Formulate environmental reports
  - Report on environmental measures taking into consideration such social requirements as environmental reporting guidelines for Sustainability Reports.
  - Work to increase reliability and transparency by having environmental data published in Sustainability Reports checked by third parties.

Increased Engagement in Environmental Communication

- Carry out environmental communication
  - Conduct publicity programs via website, internal Group publications, etc.
  - Conduct publicity programs targeting visitors to offices, PR centers, etc.
  - Communicate with experts and other third parties.
  - Receive external assessments such as environmental ratings.
  - Conduct environment-related social contribution activities such as providing support for environmental education.
- Carry out regional environmental conservation activities
  - Independently implement regional environmental protection activities.
  - Participate in clean-up events, beautification activities, tree planting events and similar activities organized by small cities, towns and villages, neighborhoods, etc.

Environment-Related Data

The following data represent annual values or year-end values in each fiscal year. Unless specifically noted, includes data for Group companies*1.

*1: J-POWER and its 25 consolidated domestic subsidiaries, such as electric power businesses and ancillary businesses related to electric power. The amounts attributed to consolidated subsidiaries are based on percentages corresponding to J-POWER's equity share. For information on companies included in the statistics, see the list of main Group companies on page 1. (However, the Power Facilities (maximum output), the Usage of Specified CFCs, and the SF_6 emissions and handled amount in Greenhouse Gas Emissions aggregate amounts from consolidated subsidiaries in the totals.)

- Figures may not add up to totals because of rounding.

Power Facilities (maximum output)

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Hydroelectric	GW	8.56	8.56	8.56	8.56	8.57	8.57
Thermal	GW	8.79	8.79	8.79	8.85	8.27	8.74
Coal-fired	GW	8.55	8.55	8.55	8.51	7.93	8.51
Natural gas	GW	0.22	0.22	0.22	0.32	0.32	0.21
Geothermal	GW	0.02	0.02	0.02	0.02	0.02	0.02
Wind power	GW	0.35	0.35	0.35	0.38	0.40	0.40
Total	GW	17.69	17.69	17.69	17.78	17.24	17.71

Electricity Output

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Hydroelectric	GWh	11,301	11,557	10,330	9,708	9,628	10,997
Thermal	GWh	58,511	58,522	59,303	59,456	57,706	59,966
Coal-fired	GWh	58,084	57,624	58,377	58,423	56,701	59,304
Natural gas	GWh	355	862	898	1,007	977	639
Geothermal	GWh	72	36	29	25	28	23
Wind power	GWh	458	590	620	638	733	760
Total	GWh	70,271	70,669	70,253	69,801	68,067	71,723

Electric Power Sold

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Hydroelectric (excluding pumped storage)	GWh	10,267	10,318	9,033	8,760	9,029	10,322
Thermal	GWh	54,786	54,777	55,577	55,697	53,992	56,124
Coal-fired	GWh	54,388	53,946	54,722	54,730	53,058	55,511
Natural gas	GWh	327	803	836	952	916	599
Geothermal	GWh	71	28	19	15	18	14
Wind power	GWh	442	562	596	614	706	730
Total	GWh	65,495	65,657	65,206	65,071	63,726	67,176

Fuel Consumption

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Coal (dry coal 28 MJ/kg equivalent)	million t	18.51	18.04	18.49	18.61	18.10	18.83
Use intensity (coal-fired)	t/GWh	340	338	338	340	341	342
Natural gas	million m^3N	60	142	148	172	173	116
Heavy oil	million kl	0.04	0.04	0.05	0.06	0.04	0.05
Diesel	million kl	0.03	0.03	0.02	0.02	0.02	0.02
Biomass	million t	0.01	0.02	0.02	0.03	0.02	0.03

Note: Denominator for use intensity represents electric power sold by coal-fired power stations.

Greenhouse Gas Emissions*2

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
CO_2 emissions (domestic and overseas power generation)*3	million t-CO_2	52.54	52.24	54.09	56.33	55.77	59.11
CO_2 emission intensity	kg-CO_2/kWh	0.67	0.67	0.67	0.68	0.67	0.64
CO_2 emissions (domestic power generation)	million t-CO_2	47.01	46.77	47.56	47.84	46.49	48.20
CO_2 emission intensity	kg-CO_2/kWh	0.72	0.71	0.73	0.74	0.73	0.72
SF_6 emissions	t	0.1	0.1	0.1	0.0	0.0	0.1
Handled	t	12.0	11.1	6.5	7.7	7.5	11.0
Recovery rate	%	99	99	99	99	99	99
HFC emissions*4	t	0.1	0.1	0.2	0.2	0.1	0.1
N_2O emissions	t	1,650	1,660	1,362	1,553	1,576	1,715

Note: Denominators for emission intensity represent electric power sold.

*2: CO_2 is calculated based on fuel combusted in conjunction with electric power generation. Other greenhouse gases (PFC, CH_4, and NF_3) are effectively not emitted. Calculation of CO_2 emissions is performed in accordance with the Act on Promotion of Global Warming Countermeasures for both Japan and overseas.

*3: This covers J-POWER and consolidated subsidiaries, such as electric power businesses and overseas businesses, as well as equity method affiliates (11 domestic and 32 overseas companies). The portions attributed to consolidated subsidiaries and equity method affiliates are based on the percentage of J-POWER's equity share. For information on companies included in the statistics, see the list of main Group companies on page 1.

*4: The same tabulation as for Usage of Specific CFCs was used.

J-POWER Group total thermal energy efficiency (at generation point)

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Total thermal energy efficiency (at generation point) based on HHV	%	40.5	40.6	40.5	40.3	40.2	40.4

Usage of Specified CFCs

		Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Specified CFCs	Stocked	t	1.0	1.0	1.0	1.0	1.0	1.0
	Consumed	t	0.0	0.0	0.0	0.0	0.0	0.0
Halons	Stocked	t	4.6	4.6	4.6	4.6	4.6	4.7
	Consumed	t	0.0	0.0	0.0	0.0	0.0	0.0
Other CFCs	Stocked	t	11.9	11.4	10.8	10.8	10.4	6.2
	Consumed	t	0.2	0.2	0.1	0.1	0.1	0.1
HFCs (CFC alternatives)	Stocked	t	12.0	12.0	12.9	13.3	14.4	15.2
	Consumed	t	0.1	0.1	0.2	0.2	0.1	0.1

SOx, NOx, and Soot and Dust Emissions

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
SOx emissions	1,000 t	10.1	12.1	12.3	10.7	9.8	10.7
Intensity (thermal)	g/kWh	0.17	0.21	0.21	0.18	0.17	0.18
NOx emissions	1,000 t	28.0	28.5	30.3	31.1	29.1	29.8
Intensity (thermal)	g/kWh	0.48	0.48	0.51	0.52	0.51	0.50
Soot and dust emissions	1,000 t	0.8	0.7	0.8	0.8	0.8	0.8
Intensity (thermal)	g/kWh	0.01	0.01	0.01	0.01	0.01	0.01

• Soot and dust emissions are calculated from monthly measurements.
• Denominators for emissions represent the electricity output of thermal power stations (excluding geothermal stations).

Industrial Waste Recycling

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Volume generated*5	million t	2.34	2.38	2.30	2.32	2.14	2.25
Volume recycled*5	million t	2.26	2.33	2.26	2.27	2.11	2.22
Recycle rate*5	%	97	98	98	98	99	99

*5: Sulfur excluded

Coal-Ash and Gypsum Recycling

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Coal-ash created	1,000 t	1,936	1,957	1,900	1,928	1,773	1,852
Volume recycled	1,000 t	1,900	1,939	1,882	1,906	1,760	1,839
Recycle rate	%	98.1	99.0	99.0	98.9	99.2	99.3
Gypsum created	1,000 t	320	362	352	322	304	318
Recycle rate	%	100	99.8	99.9	100	100	100

Office Power Consumption

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Power consumed by offices (company total)	GWh	21.39	19.40	19.48	19.04	19.51	19.61
Head office*6 power consumption	GWh	8.22	7.31	6.99	6.94	6.39	6.41
Lighting/power sockets	GWh	1.65	1.25	1.33	1.29	1.26	1.25

*6: J-POWER head office building

• Figures have been adjusted in accordance with the expansion/contraction of the range of data available for compilation.

Fuel Consumption in Offices (Gasoline Equivalent)

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Consumption	kl	1,289	1,299	1,290	1,293	1,252	1,198

• Corrected for expansion, contraction, etc. of the range of data available for compilation.

Rate of Procurement of Recycled Copy Paper

	Unit	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 ★
Copy paper*7 purchased	million sheets	56.77	58.77	61.50	61.79	58.53	55.30
Recycled copy paper*7 purchased	million sheets	56.38	58.14	61.25	61.45	57.85	54.76
Recycled copy paper*7 purchase rate	%	99	99	99	99	99	99

*7: A4 paper-size equivalent