

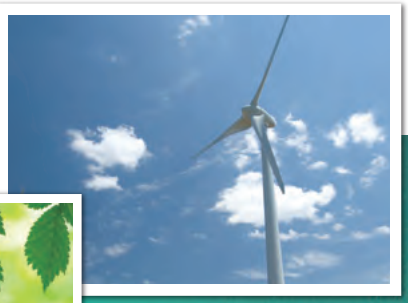

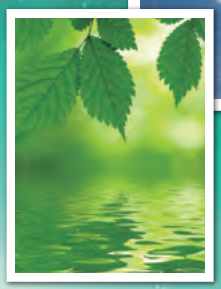


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Based on our Corporate Philosophy—"We will meet people's needs for energy without fail, and play our part for the sustainable development of Japan and the rest of the world"—the J-POWER Group engages in business conduct aimed at harmonizing energy supply and the environment.

Specifically, under our Corporate Conduct Rules and the J-POWER Group Environmental Management Vision, we regard contribution to the reduction of CO_2 emissions on a global scale and the preservation of local environments as important issues.

The J-POWER Group is implementing a medium-term management plan for the period leading up to 2025. Initiatives going forward under this plan include the expansion of renewable energy and striving toward carbon reduction and decarbonization in coal use as well as the promotion of the Ohma Nuclear Power Plant Project with safety as a major prerequisite.

In line with these policies, the J-POWER Group is promoting specific initiatives that address global environmental issues, including those concerning climate change, as well as initiatives directed at coexistence with the local environment.

J-POWER Group Environmental Management Vision

The J-POWER Group has established the J-POWER Group Environmental Management Vision, comprising the J-POWER Group Environmental Management Vision Basic Policy and Action Programs. The Action Programs are made up of Corporate Targets and Segment Targets as well as the J-POWER Group Environmental Action Guidelines formulated each year.

These are deliberated on at the Sustainability Promotion Board (and deliberated on by the Executive Committee* as required) and decided on by the President.

* Executive Committee: Please refer to page 58.

J-POWER Group Environmental Management Vision

J-POWER Group Environmental Management Vision Basic Policy

Action Programs

Corporate Targets

Targets addressed by the entire Group that lay out medium-term issues to be addressed, targets, and means

Segment Targets

Targets established and addressed by each relevant department and subsidiary

J-POWER Group Environmental Action Guidelines

Issues to be addressed in the fiscal year

Environmental Management Promotion Structures

The Executive Vice President in charge of sustainability serves as the person responsible for environmental management promotion. In addition to establishing the Sustainability Promotion Board, we have established the J-POWER Group Sustainability Promotion Conference to promote environmental management at the group-wide level.

J-POWER Group Environmental Management Vision Basic Policy (Revised on May 15, 2019)

The J-POWER Group adheres to the following Basic Policy.

Basic Stance

As an energy supplier, we will contribute to the sustainable development of Japan and the rest of the world by harmonizing our operations with the environment and ensuring the constant supply of energy essential to human life and economic activity.

Addressing Global Environmental Issues

Directing our most intensive efforts toward ensuring a stable energy supply, we will also steadily advance initiatives toward carbon reduction and decarbonization both domestically and internationally and will contribute to the reduction of CO_2 emissions on a global scale.

To that end, we will work from medium- and long-term perspectives with technologies as our central focus to realize a stable energy supply and reduction in CO_2 emissions domestically and internationally through measures including carbon reduction and decarbonization in coal-fired thermal power generation, research and development of next-generation carbon reduction and decarbonization technologies, and expanding CO_2-free power generation facilities. Our ultimate aim is the achievement of zero emissions through such measures as CO_2 capture and storage.

Addressing Local Environmental Issues

We will seek to operate in harmony with local environments by adopting measures to reduce the environmental impact of our operations while working to save, recycle, and reuse resources in order to limit waste.

Ensuring Transparency and Reliability

We will ensure that our business activities comply with all applicable laws and regulations, disclose a wide range of environmental information, and enhance communication with stakeholders.

Corporate Targets

The Action Programs for the J-POWER Group Environmental Management Vision set Corporate Targets, which are medium-term targets to be addressed by the Group as a whole.

Our Corporate Targets for fiscal 2019 are shown below.

Item		Target
Addressing Global Environmental Issues	Reducing CO_2 emissions from power generation and promoting technological development	Steadily implement the following measures aimed at realizing a low-carbon society as well as contribute to the stable supply of energy and reduction of CO_2 emissions in Japan and around the world by achieving the targets of the Electric Power Council for a Low Carbon Society's Action Plan for Achieving a Low-Carbon Society. (1) **Expansion of renewable energy** • Advance the new installation, upgrading, and equipment replacement of hydroelectric power plants in order to expand the use of hydroelectric power. • Work to significantly expand wind power facilities, including offshore wind power generation. • Work to develop new geothermal power projects in Japan. (2) **Strive toward carbon reduction and decarbonization in coal use** • Advance the development of high-efficiency integrated coal gasification combined cycle (IGCC) technology with the aim of bringing it to practical use. Advance research and development of CO_2 capture, utilization and storage (CCUS) technology. • Work to replace aging coal-fired thermal power plants with the world's leading high-efficiency coal-fired thermal power plants. • Promote the mixed combustion of biomass fuels in coal-fired thermal power plants (effective exploitation of untapped resources). • Contribute to the reduction of global CO_2 emissions and adoption of advanced technologies by expanding the coal-fired thermal power generation business using J-POWER's advanced, high-efficiency power generation technologies, especially in Asia. (3) **Promotion of the Ohma Nuclear Power Plant Project, with safety as a major prerequisite** • Advance construction of the Ohma Nuclear Power Plant, giving highest priority to safety and working to ensure the trust of the local community.
	Maintaining and improving thermal efficiency for thermal power (higher heating value (HHV) basis)	Maintain current level [about 40%]
	Reduction of sulfur hexafluoride (SF_6) emissions; gas recovery rate during inspection and retirement of equipment	Inspection: at least 97% Retirement: at least 99%
Addressing Local Environmental Issues	Reducing sulfur oxide (SOx) emissions per unit of electric power generated by thermal power	Maintain current level [about 0.2 g/kWh]
	Reducing nitrogen oxide (NOx) emissions per unit of electric power generated by thermal power	Maintain current level [about 0.5 g/kWh]
	Maintaining and increasing the recycling rate for industrial waste	Maintain current level [about 97%]
	Preservation of aquatic environments	Consider protection of river and ocean environments in business activities
	Preservation of biodiversity	Consider the protection of biodiversity in business activities
Ensuring Transparency and Reliability	Improvement of environment management level	Continual improvement of EMS

The ★ marks denote data that are the subject of third-party assurance. (Please refer to page 48.)

Actual performance versus the fiscal 2018 Corporate Targets is shown below. In fiscal 2018, all Corporate Targets were achieved.

Item		Target	
Addressing Global Environmental Issues	Reducing CO_2 emissions from power generation and promoting technological development	Steadily implement the following measures aimed at realizing a low-carbon society as well as contribute to the stable supply of energy and reduction of CO_2 emissions in Japan and around the world by achieving the targets of the Electric Power Council for a Low Carbon Society's Action Plan for Achieving a Low-Carbon Society.	
		1. Expansion of renewable energy	
		• Advance the new installation, upgrading, and equipment replacement of hydroelectric power plants in order to expand the use of hydroelectric power.	
		• Work to significantly expand wind power facilities, including offshore wind power generation.	
		• Work to develop new geothermal power projects in Japan.	
		2. Strive toward carbon reduction and decarbonization in coal use	
		• Advance the development of high-efficiency integrated coal gasification combined cycle (IGCC) technology with the aim of bringing it to practical use. Advance research and development of CO_2 capture, utilization and storage (CCUS) technology.	
		• Work to replace aging coal-fired thermal power plants with the world's leading high-efficiency coal-fired thermal power plants.	
		• Promote the mixed combustion of biomass fuels in coal-fired thermal power plants (effective exploitation of untapped resources).	
		• Contribute to the reduction of global CO_2 emissions and the adoption of advanced technologies by expanding the coal-fired thermal power generation business using J-POWER's advanced, high-efficiency power generation technologies, especially in Asia.	
		3. Promotion of the Ohma Nuclear Power Plant Project, with safety as a major prerequisite	
		• Advance construction of the Ohma Nuclear Power Plant, giving highest priority to safety and working to ensure the trust of the local community.	

Item		Target	Fiscal 2017 Performance	
Addressing Global Environmental Issues	Maintaining and improving thermal efficiency for thermal power (higher heating value (HHV) basis)	Maintain current level [about 40%]	40.4% (Reference: LHV* = 41.5%)	
	Reduction of sulfur hexafluoride (SF_6) emissions; gas recovery rate during inspection and retirement of equipment	Inspection: at least 97% Retirement: at least 99%	Inspection: 99.4% Retirement: 99.2%	
Addressing Local Environmental Issues	Reducing sulfur oxide (SOx) emissions per unit of electric power generated by thermal power	Maintain current level [about 0.2 g/kWh]	0.19 g/kWh	
	Reducing nitrogen oxide (NOx) emissions per unit of electric power generated by thermal power	Maintain current level [about 0.5 g/kWh]	0.49 g/kWh	
	Maintaining and increasing the recycling rate for industrial waste	Maintain current level [about 97%]	98.9%	
	Preservation of aquatic environments	Consider the protection of river and ocean environments in business activities	Practiced consideration for the protection of river and ocean environments	
	Preservation of biodiversity	Consider the protection of biodiversity in business activities	Practiced consideration for biodiversity	
Ensuring Transparency and Reliability	Improvement of environment management level	Continual improvement of EMS	Consistently implemented the PDCA cycle	

* LHV (lower heating value) is estimated from actual HHV (higher heating value) using conversion coefficients supplied in the Agency of Natural Resources and Energy's *Comprehensive Energy Statistics* (Fiscal 2004 edition)

	Main Fiscal 2018 Initiatives
	With regard to the expansion of the use of hydroelectric power, we started operations of the Unit No. 1 at the Akiba No. 1 Hydroelectric Power Plant after a comprehensive renewal of its major facilities that increased its capacity. We began construction on the Shinkatsurazawa Hydroelectric Power Plant Project and the Ashoro Hydroelectric Power Plant Repowering Project.
	In onshore wind power, we advanced construction of the Setana-Ohsato Wind Farm, Kuzumaki No. 2 Wind Farm, and Nikaho No. 2 Wind Farm, as well as preparation for construction of the Kaminokuni No. 2 Wind Farm. In offshore wind power, we are advancing business studies related to the Kitakyushu Hibikinada Offshore Wind Farm (tentative name). In the overseas wind power business, in August 2018, we acquired a stake in the Triton Knoll Offshore Wind Power Project in U.K.
	Looking at the development of new geothermal power projects in Japan, construction work on the Wasabizawa Geothermal Power Plant progressed as planned toward its May 2019 start of operation. We also advanced the commercialization of the Appi Geothermal Power Plant. Furthermore, having shut down the existing facilities of the Onikobe Geothermal Power Plant in April 2017, we advanced preparations to begin the construction of new facilities in April 2019.
	At the Osaki CoolGen Project, we completed demonstration tests of oxygen-blown IGCC (Phase 1) in February 2019, achieving all our test targets, including those for efficiency and load change rate. We are implementing ongoing efforts toward oxygen-blown IGCC with CO_2 separation and capture (Phase 2).
	We made progress with construction work at the Takehara Thermal Power Plant Replacement Project, as planned.
	At the Matsuura Thermal Power Plant, Takehara Thermal Power Plant, and Takasago Thermal Power Plant, we implemented mixed combustion using domestically-sourced biomass fuels (such as wood pellets and dried sewage sludge). To make effective use of unused wood and other materials from wooded areas in Japan, we jointly established SJ Wood Pellet Co., Ltd., which will manufacture and sell wood pellets, with another company.
	In Indonesia, we advanced construction work on the Central Java Project, as planned.
	For the Ohma Nuclear Power Plant Project, we carried out studies for safety enhancement measures and responded to the review of compliance with the new safety standards. We also implemented initiatives to gain the understanding and trust of local residents.

	Fiscal 2018 Performance	Fiscal 2018 Performance Evaluation
	40.6% ★ (Reference: LHV* = 41.6%)	The J-POWER Group met its target for total thermal efficiency for thermal power thanks to efforts at existing thermal power plants to maintain high-efficiency operations and to adopt high-efficiency technologies when renovating facilities.
	Inspection: 99.1% ★ Retirement: 99.3%	The target was met, with a recovery rate of 99.1% during inspections and 99.3% at retirement, thanks to efforts to curb emissions during equipment inspection through sound recovery and reuse.
	0.21 g/kWh ★	As a result of efforts including fuel management and the appropriate operation of flue gas desulfurization systems, we curbed our SOx emissions and achieved our target for emissions per unit of electric power generated.
	0.51 g/kWh ★	As a result of efforts including fuel management, combustion management and the appropriate operation of flue gas denitrification systems, we curbed our NOx emissions and achieved our target for emissions per unit of electric power generated.
	98.8% ★	We achieved our targets through efforts to promote the recycling of coal ash and to reduce industrial waste generated by the maintenance and operation of power plants.
	Practiced consideration for the protection of river and ocean environments	At operating power generation facilities that are involved with rivers, we implemented measures for the protection of the river environment appropriate to the conditions at each location. These included the implementation of sedimentation disposal measures and measures to mitigate the long-term persistence of turbidity. At operating power generation facilities that adjoin the ocean, we implemented precise control over effluent in compliance with environmental protection agreements and other such arrangements.
	Practiced consideration for 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.
	Consistently implemented the PDCA cycle	We implemented the PDCA cycle consistently and worked to raise the level of environmental management.

Fiscal 2019 J-POWER Group Environmental Action Guidelines

1 Addressing Global Environmental Issues

Expansion of Renewable Energy

- Maintain stable operations at existing hydroelectric, geothermal, wind, and biomass power stations
  - Maintain stable operations at existing hydroelectric, geothermal, wind, and biomass power stations
  - Improve efficiency through the replacement of existing hydroelectric power facilities
- Advance the development of new hydroelectric, geothermal, and wind power projects
  - Advance the development of new hydroelectric, geothermal, and wind power projects; particularly in the case of wind power, in addition to proceeding with development aimed at significantly expanding power generation capacity, advance efforts to realize offshore wind power projects
  - Advance the development of renewable energy and support thereof in developing countries

Strive toward Carbon Reduction and Decarbonization in Coal Use

- Proceed with large-scale demonstration tests of oxygen-blown integrated coal gasification combined cycle (IGCC) generation
  - Proceed with the Osaki CoolGen Project to develop high-efficiency IGCC generation technologies
- Proceed with development of CO_2 capture, utilization and storage (CCUS) technologies
  - Steadily proceed with Phase 2 of the Osaki CoolGen Project, making use of the results of pre-combustion CO_2 capture technology developed in the EAGLE Project
  - Advance basic research aimed at evaluating the technical risks and economic efficiency of CO_2 transportation and storage
  - Advance brown coal hydrogen pilot testing project in Australia
- Maintain high-efficiency operations at existing thermal power stations
- Promote biomass fuel mixed combustion at existing thermal power stations
- Move forward with a replacement project for an existing thermal power station
  - Replace the Takehara Thermal Power Station Units No. 1 and 2 with the latest USC plants to greatly improve efficiency
- Transfer high-efficiency coal-fired thermal power generation technologies overseas and promote their diffusion
  - Contribute to the reduction of global CO_2 emissions and adoption of advanced technologies by expanding the high-efficiency coal-fired thermal power generation business using J-POWER's advanced, high-efficiency power generation technologies, especially in Asia

Promotion of the Ohma Nuclear Power Plant Project, with Safety as a Major Prerequisite

- Respond appropriately to the review of compliance with new safety standards conducted by the Nuclear Regulation Authority
- Based on serious consideration of the accident at Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Station, implement voluntary initiatives to further enhance safety and advance the construction of a nuclear power plant that will be trusted by the local community

Other

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

2 Addressing Local Environmental Issues

Reduction of Emissions of Environmentally Harmful Substances

- Continue to reduce emissions
  - Properly manage combustion conditions and environmental equipment in order to reduce emissions of SOx, NOx, soot, dust, etc.
  - Properly manage wastewater treatment facilities to reduce the discharge of water pollutants
  - Properly manage facilities to reduce noise, vibration, and odors
  - Properly manage facilities to prevent the 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 highly efficient environmental equipment when newly installing or renovating facilities

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

- Make efforts toward the reuse and recycling of recyclable resources and achievement of zero waste emissions
  - Promote the reduction of waste as well as the reuse and recycling of materials and equipment during the new installation, upgrading, and demolition of facilities
  - Work to reduce consumption 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 the green purchasing of office goods
  - Maintain and continue the use of low-pollution vehicles, etc.
- Properly implement maintenance, management, and closing procedures for final disposal sites
- Properly dispose of waste
  - Dispose of waste properly and completely in accordance with the Waste Disposal and Public Cleansing Act

Management of Chemical Substances

- 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 (commonly known as the Pollutant Release and Transfer Register, or PRTR, Act)
  - Survey and manage the amounts of chemical substances subject to the PRTR Act that are emitted and transferred, notify the appropriate authorities, and publicly disclose this information
- Take appropriate measures to deal with dioxins
  - Appropriately manage waste incinerators, and survey and report on exhaust gases and ash in accordance with the Act on Special Measures against Dioxins
  - Observe the stipulations of the Waste Disposal and Public Cleansing Act and the Act on Special Measures against Dioxins when waste incinerators are scrapped
- Manage and treat PCB waste and products containing PCBs
  - Appropriately store and manage PCB waste and products containing PCBs based on the stipulations of the Waste Disposal and Public Cleansing Act, the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes, the Electricity Business Act, and the Fire Service Act
  - Steadily treat PCB waste and products containing PCBs in accordance with the J-POWER Group's Basic Policy for the Treatment of PCBs
- Strive to reduce volumes of toxic chemicals handled
- Respond appropriately to asbestos-related issues
  - Adopt appropriate measures to manage asbestos, including the prevention of dispersion, while systematically removing asbestos and replacing it with alternative substances based on the J-POWER Group's Basic Policy concerning Asbestos

Measures to Protect the Natural Environment

- Take the natural environment into account at the various stages of business
  - Recognizing that the blessings of the natural environment support rich and secure living, conduct surveys, estimates, and assessments as necessary of the impact of business activities on the natural environment, and work to protect the natural environment at each stage of the business process, including the planning, design, construction, and operation of facilities
- Consideration for aquatic environments
  - In operating power generation facilities that are involved with rivers, steadily promote measures for the protection of the river environment appropriate to conditions at each location, including the implementation of sedimentation control measures and measures to mitigate the long-term persistence of turbidity
  - In operating power generation facilities that adjoin the ocean, implement precise control over effluent in compliance with environmental protection agreements and other such arrangements
- Consideration for biodiversity
  - Show consideration for the protection of ecosystems and the diversity of species in conducting our business activities and strive to protect rare animal and plant species and their habitats
- Implement forest protection 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 the overseas transfer of environmental protection technologies
  - Promote the transfer of environmental protection technologies for thermal and hydroelectric power generation
- Incorporate environment-conscious initiatives when formulating development plans and considering investment in projects, and ensure that such initiatives are carried out

Implementation of Accurate Environmental Impact Assessments

- Accurately conduct surveys, estimates, and assessments of the environmental impact of business activities in accordance with the applicable laws and regulations, reflect the results in the details of business activities, and give due consideration to environmental protection

3 Ensuring Transparency and Reliability

1. Continual Improvement of Environmental Management (Greater Reliability)

Improvement of Environmental Management Level

- Continue to improve the operation of the environmental management system (EMS) at each J-POWER Group company
  - 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 through activities concerning ISO 14001 at certified business sites
- 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.
- Request that business partners, including contractors, cooperate in environmentally friendly business operations
- Strengthen risk management
  - Work 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 ensure that they are recognized and complied with in business operations
  - Accurately identify laws and regulations, agreements, etc., applicable to business activities, and work to ensure appropriate responses, their widespread recognition, and application, while verifying compliance
- 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 and education programs for employees engaged in waste disposal in order to ensure the appropriate disposal of waste. In addition, promote the application of the J-POWER Group Guidelines for Deciding Industrial Waste Disposal Contractors and the expansion of use of electronic manifests

2. Communication with Society (Greater Transparency)

Disclosure of Environmental Information

- Formulate environmental reports
  - In disclosing environmental information via the environmental report, we refer to such guidelines as the Environmental Reporting Guidelines of the Ministry of the Environment and carry out reporting in consideration of social demands
  - With regard to the content of the environmental report, work to increase reliability and transparency by such means as reviews by third parties

Increased Engagement in Environmental Communication

- Carry out environmental communication
  - Conduct publicity programs via websites, 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 protection activities
  - Independently implement regional environmental protection activities
  - Participate in cleanup events, beautification activities, tree planting events, and similar activities organized by cities, towns, villages, neighborhoods, etc.

The ★ marks denote data that are the subject of third-party assurance. (Please refer to page 48.)

The J-POWER Group Environmental Action Guidelines call for the reduction of emissions of environmentally harmful substances, such as SOx, NOx, soot, and dust; the conservation of resources; the reduction of waste; and the appropriate management of chemical substances. (For details, please refer to page 40.)

Furthermore, in the interests of conservation, we take the natural environment into account at various stages of our businesses, give consideration to aquatic environments and biodiversity, and implement forest protection initiatives. (For details, please refer to page 41.)

Environmentally Harmful Substances

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

Environmental Preservation Measures at Coal-Fired Thermal Power Plants

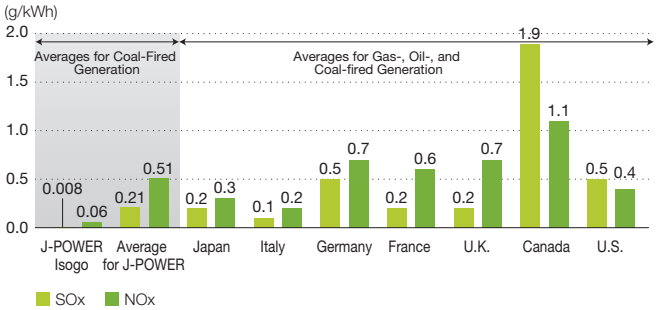
Measures to Prevent Air Pollution	The combustion of coal and other fuels can generate sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust. To reduce these emissions, we have improved our combustion methods and installed such flue gas treatment equipment as desulfurization and denitrification systems and electrostatic precipitators. Although the performance of equipment varies with its date of installation, at each facility, the newest technology available at the time of installation was used to ensure the high-efficiency removal of pollutants. 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 abnormality, ensuring that our emissions do not exceed the benchmark figures specified by the Air Pollution Control Act and environmental protection agreements. Our fiscal 2018 performance regarding SOx, NOx, and soot and dust emissions is shown in the below table. The figures obtained are quite low by international standards.
Measures to Control Coal Dust, etc.	We implement various measures to prevent the dispersal of dust during the handling of coal and coal ash, including the use of closed conveyor belts and silos, as well as windshielding and spraying with water 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 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, including keeping adsorbent materials constantly ready.
Measures to Prevent Soil Pollution	From fiscal 2004 through 2006, we conducted studies at all J-POWER Group domestic sites and determined that they were free of soil and groundwater contamination. We will continue working diligently to ensure that no soil pollution occurs.

Fiscal 2018 SOx, NOx, and Soot and Dust Emissions Performance ★

Substance	Emissions	Emissions Intensity[1]
SOx	12.4 thousand tons	0.21 g/kWh
NOx	29.4 thousand tons	0.51 g/kWh
Soot and dust[2]	0.9 thousand tons	0.02 g/kWh

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 monthly measurements.

International Comparison of SOx and NOx Emissions Intensity for Thermal Generation



Notes: 1. Emissions: OECD StatExtracts
Power generated: IEA Energy Balances of OECD Countries, 2018 Edition
2. J-POWER and Isogo figures are fiscal 2018 results.

Waste

Reduction and Effective Utilization of Waste

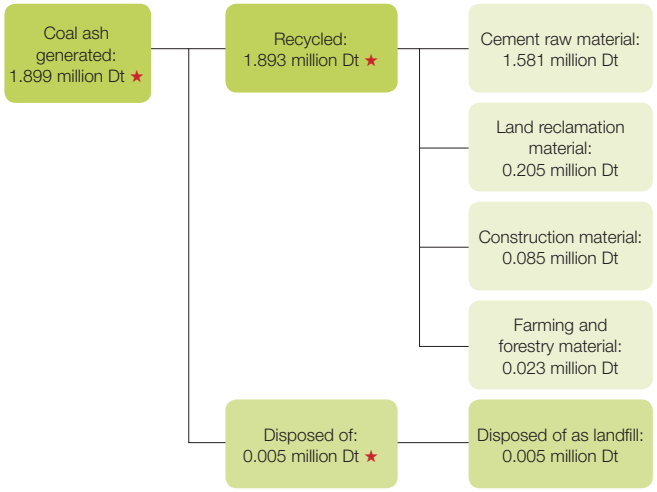
The J-POWER Group's target industrial waste recycling rate is 97%. The total amount of industrial waste we generated in fiscal 2018 was 2.30 million tons, and we achieved a recycling rate of 98.8%.

Making Effective Use of Coal Ash and Gypsum

The J-POWER Group's industrial waste consists of 96% coal ash and gypsum from thermal power stations.

We recycle 99.7% of coal ash produced in coal-fired thermal power generation, mainly as material for making cement and for land reclamation, as well as 100% of the gypsum and sulfuric acid produced as byproducts of emissions desulfurization.

Breakdown of Coal Ash Recycling (displacement tons)



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

Information on Maintenance and Management of Industrial Waste Final Disposal Sites

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

▶ **http://www.jpower.co.jp/bs/karyoku/maintenance.html**
(Japanese Only)

Chemical Substances

Management of Chemical Substances

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

PRTR Substance Release and Transfer Volumes (Fiscal 2018)

Substance	Use	Volume handled	Volume released	Volume transferred as waste
33: Asbestos	Insulation for equipment	15.1 t/y	—	15,090 kg/y
71: Ferric chloride	Wastewater treatment agents	5.9 t/y	—	5,920 kg/y
80: Xylene	Coating for machinery	5.8 t/y	2,204 kg/y	—
240: Styrene	Coating for machinery	3.0 t/y	3,007 kg/y	—
296: 1,2,4-Trimethylbenzene	House boiler fuel	4.2 t/y	85 kg/y	—
300: Toluene	Fuel for power generation (coal)	18.0 t/y	17,982 kg/y	—
405: Boron compounds	Manure additives	14.0 t/y	0.4 kg/y	—
406: PCB	Transformer insulation oil	5.4 t/y	—	5,392 kg/y

Note: Figures represent the 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.

Environmental Impact Assessment

Before building or expanding power plants, we conduct environmental impact assessments in accordance with applicable laws and regulations and implement adequate environmental preservation measures, taking the opinions of local residents into consideration. After a power plant becomes operational, we carry out ongoing monitoring in accordance with environmental protection agreements entered into with related local governments to ensure that our environmental preservation measures are effective. Currently, 11 projects are in the process of environmental impact assessment (as of July 31, 2019).

Preservation of Aquatic Environments

From fiscal 2013 onward, the preservation of aquatic environments has been designated as one of the Corporate Targets under the J-POWER Group Environmental Management Vision with the aim of reinforcing our 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. For example, near hydroelectric power stations, we take measures regarding water quality and the accumulation of silt in dam lakes and downstream area, while near thermal power stations we manage effluent emitted into nearby oceans in accordance with applicable laws and regulations.

Aquatic Environment Preservation Measures for Coal-Fired Thermal Power Plants

Measures to Prevent Water Pollution	Wastewater from such facilities as desulfurization units and offices is appropriately treated in integrated wastewater treatment systems using such processes as coagulation, precipitation, and filtration. Treated water is always monitored by automatic measuring equipment and analyzed periodically to ensure that it meets the standards set under the Water Pollution Prevention Act and environmental protection agreements.
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 minimize 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 under environmental protection 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 work to recover and reuse as much of the wastewater not released into the atmosphere as possible in order to reduce our consumption of industrial water.

* Thermal water discharge: In thermal power generation, the steam that drives the turbine is sent through a condenser for cooling, returning to its liquid state for reuse in the boiler. In almost all power stations in Japan, seawater is used for cooling in the condensers. As the seawater cools the steam passing 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.

Preservation of Forests

J-POWER owns forests in areas near its hydroelectric power facilities throughout Japan. We appropriately maintain these valuable forests in accordance with the Forest Protection Guidelines (formulated in 2007).

The J-POWER Group is contributing to forest preservation as well as the reduction of CO_2 emissions through efforts to combust biomass fuel pellets made from forestry offcuts and other materials along with coal at coal-fired thermal power stations.

Preservation of Biodiversity

To reinforce our measures in light of the Basic Act on Biodiversity, from fiscal 2011 onward, the preservation of biodiversity has been one of the Corporate Targets under the J-POWER Group Environmental Management Vision.

During the planning and design stages of power generation facilities, we incorporate environmental preservation measures to mitigate the impact on habitats, breeding environments and ecological systems as determined through environmental impact assessments that look at the wildlife and ecological systems of the surrounding land and marine areas. We strive to preserve wildlife living in the vicinity of operating power plants, particularly rare species, and their habitats.

These measures are tailored to local environments and characteristics. For example, every effort is made to avoid outdoor work during the nesting season of the Japanese golden eagle and other endangered birds that live in the vicinity of the Okutadami Dam and Otori Dam. Another example is the restoration, maintenance, and management of marshes that became landfill areas when the Okutadami Dam was expanded.

The J-POWER Group conducts environmental preservation activities in accordance with its corporate philosophy. To this end, the introduction of environmental management systems (EMSs) at all J-POWER business sites was completed in 2002. The introduction of EMSs at J-POWER's consolidated subsidiaries and at subsequently established business sites is also proceeding, and we are continuing our efforts to enhance environmental preservation measures.

Improvement of Environmental Management

On the basis of the J-POWER Group Environmental Action Guidelines, reviewed annually by management, each executive unit draws up its own Environmental Action Plan. Each executive unit periodically reviews and evaluates its initiatives and revises the measures to be taken, following the PDCA cycle.

Raising Employee Awareness of Environmental Issues

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

Fiscal 2018 In-House Environmental Training

Media	Type	Training category	Results	Main content of efforts to ensure strict compliance with environmental laws and regulations
General training	General environmental management	Environmental management briefing	Approximately 800 participants	Information regarding group environmental management initiatives and amendments to environmental laws and regulations
		Lecture presentations on the environment	Approximately 100 participants	A talk titled "Biomimetics Saves the World" given by an invited guest lecturer
	E-learning	Basic knowledge regarding environmental issues	5,735 participants	Basic knowledge regarding environmental issues
Advanced and specialized training	EMS implementation	Internal environmental auditor training	60 participants	Knowledge necessary to conduct internal audits under EMSs
		Follow-up training for internal environmental auditors	34 participants	Knowledge necessary to oversee audit teams conducting internal audits under EMSs
	Environmental laws and regulations	Skill enhancement training for waste-processing operations	65 participants	Explanation of the key points of the Waste Disposal Act
		Waste-processing risk assessment	Four locations assessed	Checking provisions of agreements and manifests specified by law
		Training on environmental laws and regulations	297 participants	Explanation of environmental laws and regulations
	E-learning	EMS course	Continuously conducted	Basic knowledge of EMSs

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

In order to reduce the impact of business activities on the surrounding environment, 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, employing waste disposal consulting firms to directly confirm the status of waste disposal by local organizations.

Responding to Environmental Incidents

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

The J-POWER Headquarters Emergency Response Team promptly notifies top management and, in the interests of information disclosure, provides information for publication on the emergency to the media and other relevant parties. We also devise measures to prevent recurrences. Of the incidents impacting the environment that occurred in fiscal 2018, one incident was reported through the mass media.

Status of Environmental Incidents

Location	Situation and Countermeasures
Water Quality Standard Exceeded in Private Water Supply at Okutadami-Hassaki	On the afternoon of September 11, 2018, a test of the private water supply installed by J-POWER at Okutadami-Hassaki found one of the monitored levels to be in excess of the water quality standards established by Japan's Water Supply Act. The standard exceeded was that for arsenic and its compounds. Minute amounts of naturally occurring arsenic had previously been detected in this water supply. This time however, a level of 0.011 mg/l, 0.001 mg/l in excess of the standard of 0.01 mg/l, was detected. Although the amount of arsenic detected was extremely low, we suspended the supply of drinking water to the affected facilities and provided an alternative potable water supply. After purging the water remaining in the water supply facilities and confirming that the water quality had improved, we restored normal water supply on October 2, 2018. We sincerely apologize for the worry and difficulty caused to all affected and are advancing efforts to determine the cause of the elevated arsenic level and formulate countermeasures to prevent recurrences.

The ★ marks denote data that are the subject of third-party assurance. (Please refer to page 48.)

Business Activities and the Environment

The charts below detail the resource consumption and environmental load of the fiscal 2018 J-POWER Group operations within Japan.

Note: The scope of applicability includes J-POWER and its 22 consolidated domestic subsidiaries, which are engaged in the electric power business, electric power related business, and other business. The amounts attributed to consolidated subsidiaries are based on percentages corresponding to J-POWER's equity share. Note that equity method affiliates (one company in Japan) are included in the calculation of CO_2 emissions from thermal power stations.

INPUT

Thermal Power Generation

- **Fuel** ★

Coal (wet) ..... 20.83 million tons
Heavy oil ..... 29 thousand kl
Light oil ..... 22 thousand kl
Natural gas ..... 130.1 million Nm^3
Biomass ..... 24 thousand tons

- **Industrial-use water** ★ ..... 10.05 million m^3
- **Major chemicals (undiluted equivalents)**

Limestone ($CaCO_3$) ..... 239 thousand tons
Ammonia (NH_3) ..... 14 thousand tons

Hydroelectric Power Generation

- **Power for pumped storage** ..... 1.3 TWh

Internal Use at Business Sites and Offices

- **Electricity (purchased)** ★

Business sites ..... 87.48 GWh
Offices ..... 15.55 GWh

- **Fuel (gasoline equivalent)**

Business sites ..... 9,020 kl
Offices ..... 1,341 kl

- **Clean water**

Business sites ..... 75 thousand m^3
Offices ..... 177 thousand m^3

- **Copy paper (A4 equivalent)** ..... 54 million sheets

Notes: 1. Other than that discharged as wastewater, 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.

Business Activities

Electric Power Generated ★ 69.6 TWh

Thermal

Hydroelectric

Wind

Auxiliary power for operation and transmission loss

Electric Power Sales ★ 64.7 TWh

Major Resources Recycled

Coal ash ★ ..... 1,893 thousand tons [99.7%]
Sludge (excluding gypsum) ..... 17 thousand tons [81.3%]
Gypsum (desulfurization byproduct) ..... 318 thousand tons [100.0%]
Sulfuric acid (desulfurization byproduct) ..... 23 thousand tons [100.0%]
Other industrial waste ..... 41 thousand tons [70.2%]
Wastepaper ..... 329 tons [92.3%]
Driftwood caught in dam reservoirs ..... 23 thousand m^3 [70.5%]

Note: Percentages indicate recycling rate.

Effective Utilization (at cement plants, etc.)

OUTPUT

Thermal Power Stations ★

- **Emissions into the atmosphere**

CO_2 ..... 46.73 million t-CO_2
SOx ..... 12 thousand tons
NOx ..... 29 thousand tons
Soot and dust ..... 1 thousand tons

- **Emissions into bodies of water**

Wastewater ..... 3.79 million m^3
Wastewater COD ..... 13 tons

CO_2 Emissions from Business-Site and Office Activities ★

- **Business sites** ..... 65 thousand t-CO_2
- **Offices** ..... 11 thousand t-CO_2

Waste ★

- **Industrial waste** ..... 27 thousand tons

(Of which, coal ash ..... 5 thousand tons)

- **Specially controlled industrial waste** ..... 0.6 thousand tons
- **Non-industrial waste**

Wastepaper ..... 27 tons
Driftwood caught in dam reservoirs ..... 2.0 thousand m^3

The ★ marks denote data that are the subject of third-party assurance. (Please refer to page 48.)

Environment-Related Data

The following data represent year-end values for each fiscal year. Unless specifically noted, includes data for Group companies.[1]

1. The scope of applicability includes J-POWER and its 22 consolidated domestic subsidiaries, which are engaged in the electric power business, electric power related business, and other business. The amounts attributed to consolidated subsidiaries are based on percentages corresponding to J-POWER's equity share. For information on the companies included, please refer to the list of Major Group Companies on page 102. (However, the figures under Usage of Specified CFCs and for SF_6 emissions and handled amount under Greenhouse Gas Emissions are calculated based on the total amounts from consolidated subsidiaries.)

Note: The sums of individual figures may not equal the corresponding totals due to rounding.

Fuel Consumption

	Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018★
Coal (dry coal 28 MJ/kg equivalent)	million t	18.61	18.10	18.83	17.73	18.87	18.09
Use intensity (coal-fired thermal power)	t/GWh	340	341	342	340	340	338
Natural gas	million m^3N	172	173	116	160	164	130
Heavy oil	million kl	0.06	0.04	0.05	0.04	0.04	0.03
Diesel	million kl	0.02	0.02	0.02	0.02	0.02	0.02
Biomass	million t	0.03	0.02	0.03	0.02	0.03	0.02

Note: Denominators for use intensity represent electric power sold by coal-fired thermal power stations

Greenhouse Gas Emissions[2]

		Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018★
CO_2 emissions (domestic and overseas power generation)[3]		million t-CO_2	56.33	55.77	59.11	55.24	57.02	53.53
CO_2 emission intensity		kg-CO_2/kWh	0.68	0.67	0.64	0.65	0.66	0.66
CO_2 emissions (domestic power generation)		million t-CO_2	47.84	46.49	48.20	45.52	48.42	46.73
CO_2 emission intensity		kg-CO_2/kWh	0.74	0.73	0.72	0.73	0.73	0.72
SF_6[4]	Emissions	t	0.0	0.0	0.1	0.1	0.0	0.0
	Handled	t	7.7	7.5	11.0	10.2	6.7	2.3
	Recovery rate	%	99	99	99	99	99	99
HFC emissions[5]		t	0.2	0.1	0.1	0.1	0.1	0.2
N_2O emissions		t	1,553	1,576	1,715	1,107	1,780	1,618

2. CO_2 emissions comprise emissions from fuel combustion for power generation. Emissions of other greenhouse gases (PFC, CH_4, and NF_3) are effectively zero. The calculation of CO_2 emissions from both operations in Japan and those overseas is performed in accordance with the Act on Promotion of Global Warming Countermeasures.
3. This covers J-POWER as well as consolidated subsidiaries and equity method affiliates, which are engaged in the electric power business and overseas business (6 domestic and 33 overseas companies). The amounts attributed to consolidated subsidiaries and equity method affiliates are based on the percentages of J-POWER's equity share. For information on the companies included, please refer to the list of Major Group Companies on page 102.
4. Annual values
5. Calculated using the same tabulation method as that employed for Usage of Specified CFCs.

Note: Denominators for emission intensity represent electric power sold.

J-POWER Group Total Thermal Efficiency for Thermal Power Generation (Gross Efficiency)

	Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018★
Total thermal efficiency (gross efficiency, HHV)	%	40.3	40.2	40.4	40.3	40.4	40.6

Usage of Specified CFCs

		Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Specified CFCs	Inventory	t	1.0	1.0	1.0	1.0	1.0	1.0
	Emissions	t	0.0	0.0	0.0	0.0	0.0	0.0
Halons	Inventory	t	4.6	4.6	4.7	4.7	4.5	4.8
	Emissions	t	0.0	0.0	0.0	0.0	0.0	0.0
Other CFCs	Inventory	t	10.8	10.4	6.2	5.8	5.0	4.7
	Emissions	t	0.1	0.1	0.1	0.0	0.0	0.0
HFCs (CFC alternatives)	Inventory	t	13.3	14.4	15.2	20.0	20.8	21.1
	Emissions	t	0.2	0.1	0.1	0.1	0.1	0.2★

SOx, NOx, and Soot and Dust Emissions

		Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018★
SOx	Emissions	thousand t	10.7	9.8	10.7	10.2	11.4	12.4
	Intensity (thermal)	g/kWh	0.18	0.17	0.18	0.18	0.19	0.21
NOx	Emissions	thousand t	31.1	29.1	29.8	27.8	29.6	29.4
	Intensity (thermal)	g/kWh	0.52	0.51	0.50	0.49	0.49	0.51
Soot and dust	Emissions	thousand t	0.8	0.8	0.8	1.0	0.9	0.9
	Intensity (thermal)	g/kWh	0.01	0.01	0.01	0.02	0.02	0.02

Notes: 1. Soot and dust emissions are calculated from monthly measurements.
2. Denominators for intensity represent the electricity generated in thermal power stations (excluding geothermal power stations).

Industrial Waste Recycling

	Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018★
Volume generated	million t	2.32	2.14	2.25	2.10	2.32	2.30
Volume recycled	million t	2.27	2.11	2.22	2.07	2.29	2.27
Recycle rate	%	98	99	99	99	99	99

Coal Ash and Gypsum Recycling

		Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018★
Coal ash	Volume generated	thousand t	1,928	1,773	1,852	1,719	1,939	1,899
	Volume recycled	thousand t	1,906	1,760	1,839	1,708	1,929	1,893
	Recycle rate	%	98.9	99.2	99.3	99.4	99.5	99.7
Gypsum	Volume generated	thousand t	322	304	318	310	329	318
	Recycle rate	%	100	100	100	100	100	100

Office Power Consumption

		Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Power consumed by offices (company total)		GWh	19.04	19.51	19.61	20.83	19.37	18.80
Head office[6]	Power consumption	GWh	6.94	6.39	6.41	6.37	6.25	6.15
	Lighting/power sockets	GWh	1.29	1.26	1.25	1.22	1.18	1.24

6. J-POWER head office building

Fuel Consumption in Offices (Gasoline Equivalent)

	Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Consumption	kl	1,293	1,252	1,198	1,230	1,324	1,341

Rate of Procurement of Recycled Copy Paper

		Unit	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Copy paper[7]	Purchased	million sheets	61.79	58.53	55.30	54.81	55.14	53.70
Recycled copy paper[7]	Purchased	million sheets	61.45	57.85	54.76	54.58	54.63	52.96
	Purchase rate	%	99	99	99	100	99	99

7. A4 paper-size equivalent

Third-Party Assurance Regarding Environment-Related Information

The environmental information and performance data (hereinafter "sustainability information") contained in the J-POWER Group Integrated Report 2019 have been reviewed by Ernst & Young ShinNihon LLC, from the point of view of accuracy and comprehensiveness for important sustainability information as determined by the Japanese Association of Assurance Organizations for Sustainability Information (J-SUS). As a result of this review, said sustainability information has received an Independent Assurance Report. The data that were calculated in accordance with the specified calculation standards* and are covered by this assurance are indicated by stars (★).

* The calculation standards are available on the J-POWER website.
http://www.jpower.co.jp/english/ir/ir51000.html

Translation

The following is an English translation of an independent assurance report prepared in Japanese and is for information and reference purposes only. In the event of a discrepancy between the Japanese and English versions, the Japanese version will prevail.

August 8, 2019

Building a better working world

Independent Assurance Report

TO:
Mr. Toshifumi Watanabe
President
Electric Power Development Co., Ltd.

Kenji Sawami
Engagement Partner
Ernst & Young ShinNihon LLC Tokyo

We, Ernst & Young ShinNihon LLC, have been commissioned by Electric Power Development Co., Ltd. (hereafter the "Company") and have carried out a limited assurance engagement on the Key Environmental Performance Indicators (hereafter the "Indicators") of the Company and its major subsidiaries for the year ended March 31, 2019 as included in J-POWER Group Integrated Report 2019 (hereafter the "Report"). The scope of our assurance procedures was limited to the Indicators marked with the symbol "★" in the Report.

1. **The Company's Responsibilities**
The Company is responsible for preparing the Indicators in accordance with the Company's own criteria, which it determined with consideration of Japanese environmental regulations as presented in the Investor Relations, IR Library, Integrated Reports, Calculation Standards of Environmental Information of the Company's website. Greenhouse gas (GHG) emissions are estimated using emissions factors, which are subject to scientific and estimation uncertainties, given instruments for measuring GHG emissions may vary in characteristics, in terms of functions and assumed parameters.

2. **Our Independence and Quality Control**
We have met the independence requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants in July 2018, which is based on the fundamental principles of integrity, objectiveness, professional competence and due care, confidentiality, and professional behavior.
In addition, we maintain a comprehensive quality control system, including documented policies and procedures for compliance with ethical rules, professional standards, and applicable laws and regulations in accordance with the International Standard on Quality Control 1 issued by the International Auditing and Assurance Standards Board in April 2009.

3. **Our responsibilities**
Our responsibility is to express a limited assurance conclusion on the Indicators included in the Report based on the procedures we have performed and the evidence we have obtained.
We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements: Assurance Engagements Other than Audits or Reviews of Historical Financial Information - ("ISAE 3000") (Revised), issued by the International Auditing and Assurance Standards Board in December 2013, Practical Guidelines for the Assurance of Sustainability Information, revised in December 2014 by the Japanese Association of Assurance Organizations for Sustainability Information and, with respect of GHG emissions, the International Standard on Assurance Engagements: Assurance Engagements on Greenhouse Gas Statements ("ISAE 3410"), issued by the International Auditing and Assurance Standards Board in December 2013. The procedures, which we have performed according to our professional judgment, include inquiries, document inspection, analytical procedures, reconciliation between source documents and Indicators in the Report and the following:
- Making inquiries regarding the Company's own criteria that it determined with consideration of Japanese environmental regulations, and evaluating the appropriateness thereof;
- Inspecting relevant documents with regard to the design of the Company's internal controls related to the Indicators, and inquiring of personnel responsible thereof at the headquarters and one power station visited;
- Performing analytical procedures concerning the Indicators at the headquarters and one power station visited; and
- Testing, on a sample basis, underlying source information and conducting relevant re-calculations at the headquarters and one power station visited.

The procedures performed in a limited assurance engagement are more limited in nature, timing and extent than a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is lower than would have been obtained if we had performed a reasonable assurance engagement.

4. **Conclusion**
Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Indicators included in the Report have not been measured and reported in accordance with the Company's own criteria that it determined with consideration of Japanese environmental regulations.

Independent third-party assurance regarding the J-POWER Group Integrated Report 2019