ESG REPORT 2020



Message from our executive officer in charge of ESG reports



Toyokazu Misono Representative Executive Officer, Vice President

The brand statement of our Group is "power with heart – We wish to be a source of power for our customers and communities by serving them with sincerity and passion." With this desire in our hearts, we want to keep moving forward together with our stakeholders, by upholding our mission of "continuing to serve our customers and communities," which includes the steady and stable supply of power.

As main ESG efforts, our Group is safely and reliably providing power with consideration for the global environment, resolving issues faced by society through new business fields, and building solid foundations to support these activities. Through efforts such as these, in accordance with our Medium-term Management Plan established in 2019, we are not only realizing sustainable growth for our Group, we are also contributing to the sustainable development of society by finding solutions for SDGs and other issues faced by global society.

Resolving issues facing the global environment and society has become an urgent concern, and expectations for businesses from society are also increasing. Furthermore, due to the great increases in ESG investing in recent years, investors have also come to highly evaluate businesses that incorporate environmental and social impacts in their long-term strategies.

In our Group, we will continue enhancing efforts to contribute to sustainable development, proactively sharing information and responding to changes in the business environment and in the expectations and demands of our stakeholders.

Editorial policies

Positioning of ESG Report

This report brings together all ESG-related information disclosed in our integrated report, on websites, etc., as well as including content with additional details. With reference to the GRI standards and other ESG reporting guidelines, we have organized the content by item—Environment, Social and Governance—to make it easier to browse through the information. Please also refer to our Integrated Report (scheduled to be issued in November 2020) for details on the Group's growth strategy and important initiatives related to sustainability.

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Reference guidelines

The 2016 GRI Sustainability Reporting Standards, Environmental Report Guidelines (2018 Edition), ISO 26000, SASB, etc.

Place of Publication

CSR and Quality Promotion Group, Office of Corporate Planning, The Kansai Electric Power Co., Inc. 3-6-16 Nakanoshima, Kita-ku, Osaka 530-8270, Japan

Report Publication Date

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Scope of Report

Period covered: April 1, 2019 to March 31, 2020 (We also report on important information that may fall outside of the time frame above.)

Companies covered: The Kansai Electric Power Co., Inc., and Kansai Electric Power Group companies. "The Company" refers to the Kansai Electric Power Co., Inc.

Numerical values for non-consolidated results from fiscal 2019 represent those of Kansai Electric Power Co., Inc. and Kansai Transmission and Distribution, Inc.

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Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Powe	r Group Kansai Electric Power Co., Inc.	Kansai Transmission and Distribution, Inc.

Contributing to the sustainable development of society

Our Group safely and reliably provides energy with consideration for the global environment, resolves issues faced by society through new business fields, and builds solid foundations to support these activities. Through efforts such as these, we will not only realize sustainable growth for our Group, but also contribute to the sustainable development of society by finding solutions for SDGs and other global social issues.



Understanding the magnitude of the impact that CO₂ has on the global environment, we will continue to contribute to efforts toward decarbonization, including increasing renewable energy generation, utilizing nuclear power generation effectively and making thermal power generation more efficient.

Low carbon	 Keep the top spot for the amount of CO₂-free power generation in Japan. Halve CO₂ emissions associated with power generation in Japan in FY2030 (compared to FY2013) 		
	 Renewable energy by the 2030s 6 million kW installed capacity 2 million kW or more new development 		
AFFORDABLE AND CLEAN ENERGY AND I	DNATRIE 13 CLIMATE JAMPION 13 ACITEM RODOLITION		



Social

We will achieve even more sustainable growth by "strengthening resilience to fulfill our unchanging mission, which is safe and stable power supply," "creating new value through diverse ways of thinking and human capital innovation" and "contributing to the resolution of the problems of society through new businesses and other efforts."

Resilience	 Strengthen infrastructure to withstand large-scale disasters and enhancement of coordination with related organizations Strengthen cyber security measures 		
Diversity	 Ratio and number of female managers Increase to more than threefold those of FY2018 by the end of FY2030 Female hiring ratio Office staff: 40% or higher Technical staff: 10% or higher 		
Community development Contribute to invigoration of local communities by sustainable community development Contribute to the Yumeshima Development Plan and Expo 2025 Osaka, Kansai, Japan 			
GENDER EQUALITY EQUALITY EQUALITY EQUALITY			

Governance

We will continue building solid management foundations that sustain growth.

 Proactive ESG information disclosure Promotion of efforts for communication with stakeholders
 Further strengthening of Board of Directors functionality Advancement of innovations in organizational culture
No major violations



Social

Our view of sustainability and CSR and systems to promote them

The Kansai Electric Power Group CSR Action Charter

Basic view

The Kansai Electric Power Group's business activities draw support from customers, regional communities, shareholders, investors, business partners, employees and many other segments of society.

This trust the Group gains from all these communities is the very bedrock of the Group's operations, without which it would be unable to maintain sustainable growth and fulfill its mission.

At the Kansai Electric Power Group, we would like to fulfill our responsibilities as a member of society, including maintaining compliance and transparency. In addition, by responding sincerely to the expectations of members of society for our group business activities, we would like to contribute to the sustainable development of society and the realization of a bright and affluent future as well as keep the trust that we receive unshakable.

Thus, the Kansai Electric Power Group develops all of its business activities and fulfills its CSR obligations as an enterprise based on its six CSR Action Principles.

CSR Action Principles

1. Safe and Stable Delivery of Products and Services As Chosen by Customers

The Kansai Electric Power Group will endeavor to develop and improve the products and services as chosen by customers and as a business operator responsible for lifelines that are indispensable to society. We will take every conceivable measure, day by day, to deliver our products and services safely and stably.

Conduct standards for individuals

- Recognize that the assurance of safety is an absolute prerequisite in all business operations, and strictly abide by laws, rules and other requirements related to safety. In addition, make safety assurance the top priority in all conduct.
- Identify factors that lead to accidents, disasters and defects, and strive to prevent them. Should an accident or disaster occur, work for rapid relief and recovery.
- In the execution of business activities, continuously improve work contents and rules to maintain and improve quality.
- While always striving to improve service, respond to customer desires and feedback sincerely, rapidly and accurately to provide customer satisfaction.

2. Proactive Approach with a View to Creating Ever Better Environment

As a provider of energy services that are closely connected with the environment, the Kansai Electric Power Group fully recognizes the scale of impact its business activities have on the global environment and therefore will strive to alleviate the environmental burden and environmental risks accompanying our business activities. Furthermore, we will aspire for creating ever better environment and contribute proactively to the development of a sustainable society through provision of products and services having lesser environmental impact.

Conduct standards for individuals

- Recognize the significance of environmental conservation, and thoroughly consider the impacts that our own work has on the environment.
- Practice conduct in our own work that considers the environment, including resource and energy conservation.

3. Proactive Contributions to Development of Local Communities

As a business operator closely linked with its local communities and lives of their inhabitants, the Kansai Electric Power Group fully recognizes that its own development is not conceivable without the development of the local communities associated with its business activities and therefore we will proactively contribute to the development of our local communities through initiatives to revitalize these communities and the local economy. Also with regard to our overseas business activities, we will strive to contribute to the development of the respective local communities with due consideration to local culture and practices.

Conduct standards for individuals

- Cooperate with local communities that have stakes in our business activities, and strive to resolve their issues.
- Be interested in activities that contribute to society, and seek to participate actively in them.

tainability for the Kansai Electric Power Group	Environment	Social		Governance
	Kansai Electric Powe	r Group Kansai Electric Power Co., Ir	пс.)	Kansai Transmission and Distribution, Inc.

4. Respect for Human Rights and Development of Favorable Work Environment by Taking Advantage of Diversity

The Kansai Electric Power Group recognizes the "human rights" as a common and universal value of the global society, supports the international standards relating to the human rights and respects the human rights in all of its business activities. Accordingly, we will strive to secure safe and comfortable work environment for all the people associated with our business activities and take advantage of diversity (each individual's diversity) to the maximum extent.

Conduct standards for individuals

- Respect the human rights of every individual with a stake in business activities.
- Never say or do anything that is discriminatory, harassing, defamatory or taunting or that could otherwise cause another person to feel uncomfortable based on race, nationality, religion, gender, sexual orientation, sexual identity, social position, family background, occupation, disability or other personal trait. Moreover, do not sympathize with such words or behavior or allow them to pass.
- Never involve in any kind of forced labor or child labor.
- Always consider safety and health, and strive to create workplace environments where people can work with peace of mind.
- Mutually acknowledge individual differences, and make the most of diverse senses of value and ways of thinking.

5. Highly Transparent and Open Business Activities

In order to properly reflect social opinions in its business activities, to ensure fairness in the management of its business operations and to faithfully carry out its accountability to society through timely transmission and disclosure of information, the Kansai Electric Power Group will promote increased communication with all members of society and conduct business activities that are transparent and open.

Conduct standards for individuals

- Proactively communicate with members of society.
- Undertake efforts fairly when providing information to members of society and conducting activities to promote understanding of our business activities.
- Gather a wide range of opinions, desires and other feedback about our business activities from customers and members of society, share this data within the company and apply it to business improvement.
- Strictly handle records related to business.
- When problems arise in business operations, report on the facts quickly and accurately.

6. Strict Enforcement of Compliance

In all aspects of its business activities, the Kansai Electric Power Group will comply with all laws and regulations, internal rules and business ethics and will ensure strict enforcement of compliance as the basis of our management. The Group as a whole will build the structure that should ensure these actual practices and will strive to maintain and improve its structure.

Conduct standards for individuals

- Recognize that assurance of safety and health, preservation of the environment, and respect for human rights, for example, are crucial from the perspective of compliance, and strictly abide by related laws and other rules.
- In the execution of business, strictly abide by related laws and regulations, including laws that restrict business, as well as regulations established by the company and other in-house rules. In overseas business activities, strictly abide by international rules as well as the laws and other regulations of applicable regions.
- Without being limited to past in-house practices and rules, organizations, systems and other corporate norms, always think from the "user's perspective" about what social norms are called for in this age and continue conduct in accordance with them based on strict legal compliance.
- Execute work duties with a thorough understanding that "prioritizing business activities over compliance is unacceptable."
- Strictly handle gift exchanges and business entertainment.
- Execute work duties with fair and free competition as prerequisites. Strictly manage personal data, customer data, business secrets and other information, and do not violate the intellectual property rights of others.
- Do not act in ways that encourage the activities of antisocial forces and organizations.
- Always be self-aware as a member of the Kansai Electric Power Group, and behave with dignity and good sense as a member of society.

Sharing standards and checking conduct

Our Group has established conduct standards for individual employees based on six CSR Action Principles, and these standards are included on a portable Conduct Card. Considering that we have made safety the foundation for all our business activities, we also include the Kansai Electric Power Group Safe Action Charter and the Safe Action Declaration, which commit to practicing safe behavior and increase individual safety consciousness, on these cards. We distribute these Conduct Cards to all employees who then specify their personal conduct vows on the backs. Employees use these cards to check their conduct and goals in their own work.

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ustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Power	Group Kansai Electric Power Co., Ind	Kansai Transmission and Distribution, Inc.

Sustainability and CSR Promotion Council at the heart of the promotion system

The Kansai Electric Power has been pursuing CSR to achieve long-term sustainable growth and development as a corporate group that serves its customers and communities and also to contribute to sustainable development of society by solving global social issues. To further deepen such efforts, in April 2019, we changed our CSR Promotion Council to the Sustainability and CSR Promotion Council. The new council establishes comprehensive measures that guide the entire group in promoting CSR, as well as comprehensive measures for the Group to contribute to the sustainable development of society and also carries out specific activities. Issues of a specialized nature are sent to committees such as the Sustainability and CSR Promotion Board for deliberation. The policies formulated by the Sustainability and CSR Promotion Council are communicated to each operating division and business location, which then develop their own activities accordingly.

CSR promotion initiatives are led by the person in charge in each division and location acting as the CSR Promotion Officer, who assigns a CSR Key Person at each workplace. Each group company also develops its own CSR promotion activities independently, while staying in communication with the Kansai Electric Power.



We continuously carry out efforts to educate employees of our Group about putting CSR into practice and improving workplace cultures. We are implementing promotion initiatives to reinforce the awareness that carrying out one's duties conscientiously on a daily basis (putting CSR into practice) builds the trust of customers and the communities. "Improving the workplace culture" is an initiative that further enhances the awareness of every employee and the workplace culture. "Putting CSR into practice (carrying out one's duties conscientiously on a daily basis)" means that we strive to meet the expectations of our stakeholders in line with the six CSR Action Principles. Based on this approach, our Company and Kansai Transmission and Distribution, Inc. are promoting awareness activities for all employees, in which CSR Key Persons elected as CSR promoter at each workplace play a major role in conducting initiatives. Also, an employee questionnaire on CSR is conducted annually targeting all employees of these two companies for analyzing and assessing CSR activities as well as for providing feedback to each workplace.

• Results of questionnaire for employees on CSR (conducted in January 2020)

Were you able to perform your duties over the last year with an awareness of the six CSR Action Principles? (non-consolidated)



Do you feel motivation and pride in your own work? (non-consolidated)



Environmen

E

- Environmental Management
- Environmentally Friendly Business
- Climate Change
- Pollution Prevention
- Resource Circulation
- Efforts Toward Conserving Biodiversity
- Water Resources

Kansai Electric Power Group

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Environmental Management

Policy and Concept

Environmental policy

Our Group's CSR Action Charter stipulates that CSR Action Principles should be observed when conducting all business activities. As we are a responsible energy business deeply involved in environmental issues, these principles aim to reduce the environmental burden and risks related to our business activities while recognizing the significance of their impact on the global environment, and to contribute to building a sustainable society by providing products and services that have low environmental impacts – all designed to create a better environment for everyone. Moreover, in line with our conduct standards for individuals, we fully recognize the significance of environmental conservation, pay due consideration to the environmental impact of our business activities and support environmentally friendly practices with an emphasis on resource and energy conservation.

Accordingly, the Kansai Electric Power Group Environmental Action Policy serves as a guideline for our medium- to long-term environmental management, focusing on environmental challenges such as global warming, resource circulation and environmental protection in local communities, each of which is closely linked to our business activities. This action policy consists of four pillars, including "initiatives contributing to the realization of a low-carbon society," with specific measures in place to achieve the stated objectives, subject to review and examination by the Sustainability and CSR Promotion Board, the results of which are communicated to our employees as well as to employees of group companies.

Environmental management system

With an ISO 14001-based environmental management system in place, our Group is engaged in advanced environmental measures and risk management. Our environmental management system, supervised by top management, is being upgraded through a continuous PDCA cycle – i.e., development of environmental policies; development, implementation, check and review of our Group's Eco Action (an action plan for environmental management); and management review by the Sustainability and CSR Promotion Board.

Eco Action covers both our business activities and office activities while the latter concerns group-wide efforts to conserve resources and save energy.

 Environmental management system of the Kansai Electric Power Group (PDCA cycle)



Kansai Electric Power Group Environmental Action Policy

1. Initiatives contributing to the realization of a low-carbon society

- (1) Lowering electric power's carbon intensity
- (2) Technological developments for constructing the Smart Grid
- (3) Contributing to energy conservation, cost reductions and CO₂ emissions reductions for customers and society
- (4) Overseas activities
- (5) Technical development efforts
- (6) Value chain efforts
- (7) Efforts to reduce greenhouse gases other than CO₂

2. Initiatives contributing to the realization of a recycling-oriented society

- (1) Promotion of proactive 3R efforts aimed at zero emissions
- (2) Promoting safe, reliable, and complete disposal of PCB wastes
- (3) Promoting green procurement

3. Promotion of environmental protection in local communities

- (1) Measures to prevent air and water pollution, etc.
- (2) Efforts to strictly manage and reduce toxic chemicals
- (3) Considering the preservation of biodiversity
- 4. Promoting environmental management and environmental communication
 - Continuous improvement using environmental management systems based on ISO 14001 systems and strict adherence to laws and regulations
 - (2) Active advancement of environmental awareness raising activities with local communities and customers and disclosure of environmental information

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Sustainabilit	y for the Kansal Electric Power Group	

Environment

Kansai Electric Power Gro

Governance

Social

Environmental management efforts are ongoing, with the President (as Chief Environmental Management Officer) leading the environmental officers of each division and organization. Meanwhile, the Office of Corporate Planning and the Office of Energy and Environmental Planning are promoting corporate environmental management, utilizing their expertise in environmental issues while providing assistance and guidance to each division (support for independent environmental management).

The Sustainability and CSR Promotion Board, which is in principle held twice a year, reviews our environmental management system, the results of which are reflected in the system itself. At the same time, the Kansai Electric Power Group Environmental Management Committee, comprised of representatives from consolidated subsidiaries and equity-method affiliates, usually holds an annual meeting to exchange information on issues concerning our Group's environmental management activities while cooperating as needed with the Sustainability and CSR Promotion Board. Environmental management promotion system of the Kansai Electric Power Group



* The 50 companies, which are selected from 80 consolidated subsidiaries and 4 equity-method affiliates, exclude those that have low environmental impacts and Kansai Transmission and Distribution, Inc.

• • • Goals • • •

Environmental Management System (list of Eco Actions)

Kansai Electric Power Group Eco Actions (results in fiscal 2019 and targets for fiscal 2020) Initiatives contributing to the realization of a low-carbon society

ltem	FY2019		FY2020
item	Targets	Results	Targets
Advancing efforts to control CO2 emissions	 Keep the top spot for the amount of CO2-free power generation in Japan Halve CO2 emissions associated with power generation in Japan in FY2030 (compared to FY2013) About 0.37 kg-CO2/kWh*¹ for the entire electric power business by FY2030 	We kept the top spot for the amount of CO-free power generation in Japan (based on surveys and comparisons made in the electric power statistics) Reduction of about 40% from fiscal 2013 levels of CO ₂ emissions associated with power generation in Japan (FY2019 results: About 28.5 million t-CO ₂) [The Electric Power Council for a Low Carbon Society (ELCS): FY2018] 0.463-kg-CO ₂ /kWh* ¹ ([Our Company: FY2019] 0.318-kg-CO ₂ /kWh* ^{1,2})	•Keep the top spot for the amount of CO2-free power generation in Japan •Halve CO2 emissions associated with power generation in Japan in FY2030 (compared to FY2013)
Continuing safe and stable operation of nuclear power plants* ³	 Advance efforts to operate nuclear power plants that make safety the top priority 	 We continued the safe and stable operations at running plants We implemented safety improvement measures that conform to new regulatory requirements and voluntary efforts for various other safety measures. 	Operation of nuclear power plants that make safety the top priority
Further development and utilization of renewable energy	• Achieve 6 million kW of installed capacity by 2030s (2 million kW or more new development in Japan and abroad)	Accumulated installed capacity with a total of 4.43 million kW (Capacity of facilities that have begun operation (completed construction): about 3.89 million kW; Project underway: about 0.54 million kW)	Continued
Maintaining and improving the thermal efficiency of thermal power plants ^{*3}	• Benchmark indicators*4 (A: 1.00, B: 44.3%)	• A-benchmark indicator: 1.03, B-benchmark indicator: 47.9%	Continued
Reducing transmission and distribution loss*5	•Reduce from current level	•4.8%	To be maintained and reduced
Promoting use of innovative forms of energy among customers and communities	•Contribute to making energy use by customers and society more sophisticated	•We worked to expand use of devices and services that contribute to more sophisticated utilization of energy by customers and society. •Smart meters deployed: 0.94 million/year (Cumulative total: 11.53 million), progress rate: about 88%	Continued
Limiting SF ₆ emissions* ⁶ (gas recovery rate upon inspection/removal of equipment)	•97% (upon inspection) •99% (upon removal)	• 99.0% (upon inspection) • 99.4% (upon removal)	Continued

*1 Amount of CO₂ emissions per unit of electricity use (sales)
 *2 This value is provisional. Based on the Law Concerning the Promotion of the Measures

*2 This value is provisional. Based on the Law Concerning the Promotion of the Measures to Cope with Global Warming and other factors, the actual value of the CO₂ emission factor will be officially announced by the country.

*3 Targets and results apply only to our Company

- *4 Indicators based on the benchmark system of the Law Concerning the
- Rational Use of Energy *5 Targets apply only to Kansai Transmission and Distribution, Inc.
- *6 On the calendar year basis

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Sustainability for the Kansai Electric Power Group	Environment	Social		Governance
	Kansai Electric Powe	er Group Kansai Electric Po	ower Co., Inc.	(Kansai Transmission and Distribution, Inc.)

Initiatives contributing to the realization of a recycling-oriented society (non-consolidated)

ltem	FY2	FY2020	
	Targets	Results	Targets
Maintaining industrial waste recycling rate	• 99.5%	• 99.8%	Continued
Proper processing of PCB wastes	 Proceed with certainty to achieve processing before the legal deadline 	Amount of high-level PCB processed (Cumulative total): 5,365*	Continued

* Number of high-voltage transformers, condensers and other electrical equipment that were subcontracted to the Japan Environmental Storage & Safety Corporation (JESCO).

Promotion of environmental protection in local communities (non-consolidated)

ltem		FY2	FY2020	
	Targets		Results	Targets
Maintaining sulfur oxide (SOx) and nitrogen oxide (NOx) emission factors	SOx Emission factors: maintain the lowest levels in the world		Overall: 0.021 g/kWh Thermal: 0.036 g/kWh All agreed values were met.	Continued
	NOx	Emissions: strictly adhere to agreed values at each power plant	Overall: 0.043 g/kWh Thermal: 0.074 g/kWh All agreed values were met.	Continued
Conservation of biodiversity	Consideration of biodiversity through business activities		 We studied the status of vegetation around the Kurobe Dam through literature and field surveys. We examined biodiversity conservation further based on survey results. 	Continued

Office energy and resource conservation activities (group-wide items)

	Item	Reducing office electricity consumption	Reducing office water consumption	Improving fuel efficiency of company vehicles	Reducing copy paper consumption
	Targets	Reduce by 1% or more from previous year	Reduce as much as possible	Improve as much as possible	Reduce as much as possible
fresults	Non- consolidated	(GWh) 80 77 60 40 20 2017 2018 2019 (FY)	(1,000 m ³) 600 400 400 200 0 2017 2018 2019 (FY)	(km/L) 12.0 11.31 11.40 11.0 10.95 10.0 9.0 2017 2018 2019 (FY)	(t) 800 809 773 747 700 600 500 2017 2018 2019 (FY)
Record o	Group companies*	(GWh) 80 60 40 25.2 26.5 27.0 2017 2018 2019 (FY)	(1,000 m ³) 600 400 200 76.89 71.87 68.52 0 76.89 71.87 68.52 2017 2018 2019 (FY)	(km/L) 12.0 11.0 <u>9.60</u> <u>9.82</u> <u>9.35</u> <u>9.0</u> 2017 2018 2019 (FY)	(t) 800 700 600 <u>500</u> 541.6 520.2 514.0 2017 2018 2019 (FY)

* Calculated for 38 consolidated subsidiaries (excluding Kansai Transmission and Distribution, Inc.) for which three-year data (FY2017–2019) is available.

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Pow	er Group Kansai Electric Power Co	Inc.

Efforts

Environmental education (practical knowledge and awareness raising)

We conduct education for our employees in order to develop human resources that understand the Kansai Electric Power Group Environmental Action Policy and are able to implement it.

Specifically, we are conducting specialized education to provide practical knowledge, etc.

Environmental compliance

Recognizing "strict enforcement of compliance" as part of materiality (important issues), our Group is committed to eliminating any major violations of environmental compliance.

Major violations of environmental compliance reported in FY2017–2019 are summarized below.

Major environmental compliance violations

Itom	Targets		Results	
item	Targets	FY2017	FY2018	FY2019
Major environmental compliance violations	0	1 (0)	1 (0)	4

• Major violations of environmental compliance occurred or reported in each fiscal year are included.

• The results for FY2017–2018 were reviewed since "major violations of environmental compliance" were redefined as "violations that have impacted (or could impact) the surrounding environment and/or human health." (The numbers in parenthesis are violations reported before the redefinition.)

Major violations of environmental compliance occurred or reported in FY2019 are summarized below.

Summary of major violations of environmental compliance

• Delayed recovery of spills (insulating oil containing trace amounts of PCB) from facilities caused by natural disasters

· Loss of PCB-containing products (fluorescent lighting ballasts) during construction work

Absence of measures against the dispersion of asbestos during demolition of facilities (two violations reported)

We are implementing efforts to identify root causes, review in-house rules (observance of relevant laws and regulations), educate employees and improve facilities to prevent any recurrence of these violations.

In addition, details of these incidents are communicated company-wide and preventive measures are shared between all those concerned to prevent similar violations from taking place at other offices.

Performance data

	Eco Action-related (non-consolidated)	Unit	FY2017	FY2018	FY2019
SF ₆ gas emissions		t	0.1	0.2	0.1
	•Upon inspection	t	0	0.2	0.1
	•Upon removal	t	0.1	0.1	0.0
SF ₆ gas recover	y rate				
	•Upon inspection	%	99.6	98.5	99.0
	•Upon removal	%	99.3	99.3	99.4
Transmission and distribution loss rate ^{*1*2}		%	4.4	5.1	4.8
Number and rate of smart meters installed ^{*2}		million %	About 9.32 About 71	About 10.58 About 81	About 11.53 About 88

*1 Transmission and distribution loss rates = (area transmission-end power – area consumption power (end use) – substation power) / area transmission-end power × 100 [%]

Area" in this case refers to the entire supply area of Kansai Transmission and Distribution, Inc. *2 Data of Kansai Transmission and Distribution, Inc. only

tainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Powe	er Group Kansai Electric Power Co., Ind	Inc. Kansai Transmission and Distribution, Inc.

Office-related (non-consolidated)		Unit	FY2017	FY2018	FY2019
Energy and resource conservation (Office division)	Office electricity consumption*1	GWh	77	74	75
	Office water consumption ^{*1}	1,000 m ³	452	426	413
	Fuel efficiency of company vehicles	km/L	11.31	11.4	10.95
	Vehicle fuel consumption (gasoline)	1,000 kL	2.1	2.0	1.7
	Vehicle fuel consumption (diesel oil)	1,000 kL	0.3	0.3	0.4
	Copy paper consumption	t	809	773	747
	Office electricity	10,000 t-CO ₂	3.3	2.4	2.4
CO ₂ emissions resulting from office activities ^{*2}	Office water	10,000 t-CO ₂	0.01	0.01	0.01
activities	Vehicle fuels	10,000 t-CO ₂	0.6	0.5	0.5

*1 The scope of this calculation was reviewed for the actual consumption amounts of office electricity and water.

*2 CO₂ emissions from office activities = amount of electricity consumption × adjusted factors CO₂ emissions from office water consumption = amount of office water consumption × emission factor

 CO_2 emissions from vehicle use = amount of vehicle fuel consumption × coefficient by type of fuel

Status overview of our business activities and environmental load (FY2019)

Input

Sus

	Fuels for powe	er generation
neration	Coal	3,305,000 t (dry coal weight)
er ger	Heavy oil	48,000 kL
wod	Crude oil	30,000 kL
erma	LNG (liquefied natura	al gas) 6,502,000 t
els for th	Wood pellets Other	200 kL (heavy oil equivalent) 202,000 kL
æ		(heavy oil equivalent)
Fuel	is for nuclear ver generation (we	ight of pre-irradiation uranium)
	5	
	Water for pow	er generation
Ind	ustrial water	2.64 million m ³
Cle	an water	0.92 million m ³
Rive gro	er water, undwater, etc.	0.41 million m ³
Sea (de	water salinated)	2.92 million m ³
(0.0		
	Resou	ırces
Lim	estone	61.000 t
Lim Am	iestone monia	61,000 t 8,000 t
Lim Am	nestone monia	61,000 t 8,000 t
Lim Am	nestone monia Offi	61,000 t 8,000 t ice
Lim Am Off	nestone monia Offi ice electricity	61,000 t 8,000 t ice 75 GWh
Lim Am Off	nestone monia Offi ice electricity ice water	61,000 t 8,000 t ice 75 GWh 0.41 million m ³
Lim Am Off Off Cop	eestone monia Offi ice electricity ice water by paper	61,000 t 8,000 t ice 75 GWh 0.41 million m ³ 747 t
Lim Am Off Off Cop	estone monia Offi ice electricity ice water by paper	61,000 t 8,000 t ice 75 GWh 0.41 million m ³ 747 t
Lim Am Off Off Cop	estone monia Offi ice electricity ice water by paper Gasoline	61,000 t 8,000 t ice 0.41 million m ³ 747 t 1,700 kL
Vehicle fuels Offf Cop	estone monia ice electricity ice water oy paper Gasoline Diesel oil	61,000 t 8,000 t ice 75 GWh 0.41 million m ³ 747 t 1,700 kL 400 kL
Vehicle fuels Offf Cop	eestone monia ice electricity ice water by paper Gasoline Diesel oil	61,000 t 8,000 t ice 75 GWh 0.41 million m ³ 747 t 1,700 kL 400 kL

Business activities



Output

CO ₂ (carbon dioxide)*2	38,440,000 t-CO2
	(35,940,000 t-CO2)*3
N2O (nitrous oxide)*4	2,3000 t-CO2
SF6 (sulfur hexafluoride) ^{★4}	3,8000 t-CO2
SOx (sulfur oxides)	2,138 t
NOx (nitrogen oxides)	4,414 t
Released into v	water areas
COD emissions	22 t
Total effluents	4.20 million m ³
Radioactive	e waste
Low-level radioactive	507 drums
waste generated*5	(200 L drums)
Industrial wa	aste etc
Total emissions	621,000 t
ల్ల్ Recycling	617000 t
Reduction in	33,000 t
Size intermediate treatmen	t 11.000 t
	11,000 t
Recycling rate	99.8%
CO ₂ emissions resulting f	rom office activities
Total emissions	28,797 t-CO2
Office electricity (0.318 kg-CO ₂ /kWh)	23,743 t-CO ₂
(0.23 kg-CO ₂ /m ³)	95 t-CO2
(Gasoline: 2.322 kg-CO ₂ /	L) 4,959 t-CO ₂
• Figures in parentheses are CC The emission factor for office reflects carbon credit offsets	D2 emission factors. electricity consumption and other factors.
Custon	ners

Note 1: This table contains non-consolidated figures for Kansai Electric Power Co., Inc. only. Note 2: Totals may not sum due to rounding.

Note 3: Thermal power generation figures do not include biomass power generation.

*1 Excludes amounts of power for inside power plants
 *2 Includes CO₂ originating from electricity purchased from other companies
 *3 Emissions reflecting environmental values, etc. adjusted according to the renewable energy feed-in tariff system
 *4 CO₂ conversion
 *5 Net generation (generated amount – reduced amount)

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Environmentally Friendly Business

Policy and Concept

• Further development and utilization of renewable energy

As a leading "decarbonization" company, with the goal of having 6 million kW of installed capacity for renewable energy sources in Japan and abroad by the 2030s, our Group is working for the development of at least 2 million kW in new capacity. In Japan, we have been working to increase the output of existing hydroelectric power plants and to develop power generation using renewable energy sources, including solar, land-based wind, offshore wind, biomass, and geothermal. As of March 31, 2020, we announced the start of operation for about 3.46 million kW of generation capacity. While keeping an eye on trends in a fundamental review of the FIT system, we are committed to commercializing projects that are underway. At the same time, we will be reducing power generation costs, contributing to local communities and operating power sources, either developed or acquired, as part of our efforts to make Japan's power sources less carbon-intensive, all designed to be less dependent on the FIT system. We also aim to expand renewable energy business overseas with the technical expertise and experience cultivated through our international business and cooperation activities so far. Moreover, we are committed to making our share of contribution to the global social issues including SDGs by utilizing our own knowledge and know-how in electric utility business.

• Group companies' environmental businesses

The technical expertise of each group company combined with our Group's integrated management resources are key to developing a wide range of environmental businesses.

• Energy services responding to the needs of customers and society

While there has been a greater demand for increased environmental values, our Group, as a leading "decarbonization" company, is committed to promoting and encouraging renewable energy. We will also expand services that contribute to the lives of our customers and benefit society.

**** Goals * ***

• Advancing efforts to control CO₂ emissions

- Keep the top spot for the amount of CO₂-free power generation in Japan.
- Halve CO₂ emissions associated with power generation in Japan in FY2030 (compared to FY2013)

Further development and utilization of renewable energy

• Achieve 6 million kW of installed capacity by 2030s (2 million kW or more new development in Japan and abroad)

Efforts **

Status of domestic development in fiscal 2019

Our Group decided in September 2019 to take a stake in Furusato Netsuden K.K., which develops and operates geothermal power generation in Aso-gun, Kumamoto Prefecture.

On July 27, 2016, we also invested in Akita Offshore Wind Corporation, which was set up by Marubeni Corporation at the ports of Akita and Noshiro (Akita Prefecture). We had been conducting feasibility studies with joint operators* and in February 2020 we made a decision on the commercialization of the project.

* Marubeni Corporation, OBAYASHI CORPORATION, Tohoku Sustainable & Renewable Energy Co., Inc., Cosmo Eco Power Co., Ltd., Chubu Electric Power Co., Inc., The Akita Bank, Ltd., Omori Construction Co., Ltd., Sawakigumi Corporation, Kyowa Oil Co., Ltd., Kato Kensetsu Co., Ltd., Kanpu Co., Ltd., and Sankyo Co., Ltd.

Expansion of renewable energy power assets overseas

The total power capacity of our renewable energy assets overseas has expanded to approximately 950 MW^{*} across nine projects. In terms of international business, renewable energy accounts for about one third of the total power generation assets invested and owned by Kansai Electric Power Company.

* As of the end of July 2020, one project under construction included.



Nam Ngiep 1 Hydropower Project in Laos



Aviator Onshore Wind Farm Project in the U.S.

Renewable energy capacity of facilities that have begun operation (completed construction) in Japan and abroad: 3,885 MW (as of the end of FY2019)

Sustainability for the Kansai Electric Power Group	Environment	Social		Governance
	Kansai Electric Pow	er Group Ka	ansai Electric Power Co., Inc.	Kansai Transmission and Distribution, Inc.

• [Group companies' environmental businesses]

Kanden Facilities Co., Ltd. receives the Jury's Special Award at the Energy Conservation Grand Prize (Product & Business Model Category).

Kanden Facilities Co., Ltd. received the Jury's Special Award at the 2019 Energy Conservation Grand Prize (Product & Business Model Category), which is organized by the Energy Conservation Center, Japan, for its contribution to the promotion of energy conservation in the building sector through the provision of energy management services throughout the life cycle of a facility.

In addition to conventional energy management services that support PDCA activities for energy conservation, the services that were recognized include advanced energy management services, where financial support is provided for the installation of energy/power-saving facilities with any energy cost savings are shared with customers.

Building management companies such as Kanden Facilities Co., Ltd., which routinely monitor energy consumption and facility conditions, are expected to play a practical role in supporting the PDCA activities of our customers' energy conservation throughout the life cycle of the facility. We are committed to improving our energy management expertise as part of our efforts to boost the asset values of our customers.

Energy management service system





Award ceremony

Performance data

Development and promotion of renewable energy (consolidated)		Unit	FY2017	FY2018	FY2019	
Development		Capacity of facilities that have begun operation (completed construction)		*	372.46	388.58
and promotion of renewable energy	of	Projects underway	10,000 kW	*	66.14	54.02
	9)	Accumulated installed capacity		*	438.60	442.60
Solar power generation		10,000 kW	*	8.17	8.17	
	•Wind power generation		10,000 kW	*	30.40	30.95
	Hydroelectric power generation		10,000 kW	*	374.36	377.80
	Biomass power generation		10,000 kW	*	25.67	25.67
	•Ge	othermal power generation	10,000 kW	*	_	0.01

* Shown are the results in FY2018-2019, with targets revised to "achieve 6 million kW of installed capacity by 2030s (2 million kW or more new development in Japan and abroad)" in line with the Kansai Electric Power Group Medium-term Management Plan (2019-2021), which was set out in 2019.



Policy and Concept

Social background

In the Paris Agreement that established a framework for climate change countermeasures, every country is expected to submit and revise greenhouse gas reduction targets every five years. In response, the Japanese government set a target to "reduce greenhouse gas emissions 26% by fiscal 2030 compared to fiscal 2013." This target is consistent with the 2030 energy mix established by the government.

• Targets and efforts to achieve them

As a leading "decarbonization" company, we declared our intention to make efforts to reduce environmental load, including tackling climate change – a commitment we made in the Kansai Electric Power Group Medium-term Management Plan as part of our contribution to Japan's global warming countermeasures. Among these efforts, with a base of strength in nuclear power generation, we will seek to achieve 6 million kW of renewable installed capacity by the 2030s. We are making these our "two wheels" of non-fossil fuel energy supplies. Through these efforts, we will keep the top spot for the amount of CO₂-free power generation in Japan, and halve CO₂ emissions associated with power generation in Japan in fiscal 2030 compared to fiscal 2013.

Specifically, we will pursue "lowering electric power's carbon intensity," including the utilization of nuclear power generation with the most emphasis on safety and through the further development, incorporation and utilization of renewable energies as well as by improvement of the efficiency of thermal power plants and other efforts. Moreover, we will increase the electrification ratio in society and advance the efficient use of electricity. In addition to the advancement of these efforts in both supply and demand, we will build a next generation network that is prepared to incorporate large amounts of renewable energy as a means of connecting them. Accordingly, the Electric Power Council for a Low Carbon Society (ELCS), which was established by a consortium of electric companies including our Company, set a CO₂ emission factor target of about 0.37 kg-CO₂/kWh (energy used) by fiscal 2030, based on the projected energy mix. We will continue contributing to efforts to achieve its goals.

• • • Goals • • •

• Advancing efforts to control CO₂ emissions

- Keep the top spot for the amount of CO₂-free power generation in Japan.
 Halve CO₂ emissions associated with power generation in Japan in FY2030 (compared to FY2013)
- Continuing safe and stable operation of nuclear power plants
- Operation of nuclear power plants with top priority placed on safety
- Further development and utilization of renewable energy
- Achieve 6 million kW of installed capacity by 2030s (2 million kW or more new development in Japan and abroad)
- Maintaining and improving the thermal efficiency of thermal power plants (lower heating value base)
- Benchmark indicators (A: 1.00, B: 44.3%)

• Reducing transmission and distribution loss* • To be maintained and reduced

- $\boldsymbol{*}$ Targets apply only to Kansai Transmission and Distribution, Inc.
- Promoting use of innovative forms of energy among customers and communities
- Contribute to making energy use by customers and society more sophisticated
- Limiting SF₆ emissions (calendar year basis) (gas recovery rate upon inspection/removal of equipment)
- 97% (upon inspection)
- 99% (upon removal)

Efforts + +

• Our Group's CO₂ emissions associated with power generation in Japan

Our Group's CO₂ emissions associated with power generation in Japan amounted to about 28.5 million tonnes in FY2019; emissions have been declining since FY2013 when the target was set. As a leading "decarbonization" company, we are committed to safely and stably operating Takahama Nuclear Power Station Units 3 and 4 and Ohi Nuclear Power Station Units 3 and 4 while developing and promoting renewable energy. Our efforts have resulted in a reduction in CO₂ emissions of about 40% from 2013 levels.

• Continuing safe and stable operation of nuclear power plants

Since nuclear power generation emits no CO₂, it is an important source of energy that prevents global warming. With understanding of residents of local communities, we continue the safe and stable operation of plants that have resumed operation and restart plants as soon as the safety is confirmed by appropriately responding to examinations of the Nuclear Regulation Authority. We will also keep independently and continuously promoting safety measures that exceed regulatory requirements.

The Group's CO₂ emissions and CO₂ emission factors associated with power generation in Japan



Sustainability for the Kansai Electric Power Group	Sustainability for the Kansai Electric Power Group Environment		Governance	
	Kansai Electric Pow	er Group Kansai Electric Power Co., Ir	. Kansai Transmission and Distribution. Inc.	

• Maintaining and improving the thermal efficiency of thermal power plants

We continuously undertake measures related to facilities and operation, working to reduce the amount of fuel used and suppress CO₂ emissions by maintaining and improving thermal efficiency.

Our Himeji No. 2 Power Station, one of our largest natural gas-fired thermal power plants, employs a combined-cycle power generation with advanced 1,600°C class gas turbines. We are working to suppress CO₂ emissions by increasing thermal efficiency to about 60%, which is the highest global standard, and reducing the amount of fuel used.

Moreover, at Units 1 and 3 of the Aioi Power Station, in addition to the heavy oil and crude oil we had been using, we began using natural gas, which is less expensive and better for the environment, in 2016.

Encouraging efficient energy use

With the goals of realizing energy conservation, cost cutting and CO₂ reduction for our customers and society, we are offering high-efficiency systems that utilize renewable energy sources and heat pump technologies, as well as proposing effective operation procedures, for example. In addition, we are providing total support for energy management to customers and other members of society and undertaking activities that serve these purposes, including the services that allow customers to see energy use. The solution offered to residential customers is "total electric conversion," which, through efficient use of energy, can make our lives more comfortable and convenient. Specific products and services include an energy-efficient hot water supply system (EcoCute), safe, comfortable and convenient electric appliances (IH cooking heaters, etc.), and power consumption visualization (Hapi e-Miruden). The internet-based service Hapi e-Miruden monitors the amount and rate of electricity and gas consumed. In addition, by entering data on utility costs the system can automatically indicate the total amount of household CO₂ emissions while providing useful information, such as tips on energy conservation according to registered equipment or power consumption patterns. We are also providing total support for the energy management of our business customers. For example, we offer proposals for energy systems that are optimized to their various needs, including making energy use more efficient, and explain how to operate these systems. We also work with other group companies to provide a range of services such as energy conservation diagnoses and energy management support appropriate to the customer's facility usage patterns. We remain committed to helping our customers minimize their energy consumption, achieve cost savings, and reduce their CO₂ emissions.

Adoption of smart meters

Kansai Transmission and Distribution, Inc. is systematically introducing smart meters. In addition to making amounts of electricity use visible to customers, installing smart meters contributes to the energy conservation of society as a whole, allows flexible handling of various rate options, and enables formation of facilities efficiently according to the conditions of electricity use, among other benefits. We have completed installation of smart meters for customers that receive high-voltage and extra-high-voltage electricity, and we plan to install them for every customer that receives low-voltage power by fiscal 2022.

● Controlling SF₆ gas emissions

Greenhouse gases other than CO₂, Sulfur hexafluoride (SF₆) is electrically extremely stable and safe to humans, so it is used in gas circuit breakers and other devices.

Most SF₆ emissions into the atmosphere attributable to internal inspections and the removal of SF₆ equipment are recovered.

Group companies' power generation business

Kanden Energy Solution Co., Inc. (hereinafter "Kenes") provides one-stop optimal solutions to customers, leveraging technical capabilities and expertise accumulated through its electricity business, coupled with our Group's comprehensive resources. Specific services such as utility services (including ESP* services) help customers save on energy, costs and CO₂ emissions. Meanwhile, Kenes' power generation business capitalizes on their technical capabilities, engineering expertise and extensive experience/know-how as an energy professional, thereby introducing and promoting untapped and natural energy sources as a means to promote and encourage renewable energy. *Energy service provider

Major achievements Solar power generation

Arida Solar Power Station (Arida City, Wakayama Prefecture) The Arida Solar Power Station is the Group's largest solar power station with about 150,000 solar panels installed across a large area.



Wind power generation

Awaji Wind Power Station (Awaji City, Hyogo Prefecture) While harmonizing with the community, this station operates by utilizing the wind blowing through the hills in northern Awaji City.



*The reduction in CO₂ emissions was a figure calculated upon commencement of operations.

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Pow	er Group Kansai Electric Power Co., Inc	. Kansai Transmission and Distribution, Inc.

Addressing TCFD Recommendations

Our Group has set targets related to ESG and are making efforts toward achieving them not only for sustainable growth in our company through the safe and steady supply of energy that considers the global environment, but also for the contribution for sustainable development of society by solving global social issues.

We follow the recommendations of the Task Force on Climate-related Financial Disclosures or TCFD* (hereinafter "TCFD Recommendations") to analyze long-term risks and opportunities, with results used to properly address climate change.

* TCFD was established by the Financial Stability Board, which is an international agency that has central banks, financial regulatory authorities and other organizations from major countries as members. In total, 1419 organizations around the world, including financial institutions, businesses and governments, declared their support for the TCFD Recommendations as of September 16, 2020.

Support for the TCFD Recommendations

On May 27, 2019, our Company declared our support for the TCFD Recommendations. Recognizing the size of the impacts that our Group business activities have on the global environment, we declared our support for the TCFD Recommendations to "analyze and disclose business risks and opportunities originating in climate change over the medium and long terms in order to reduce risks of financial market destabilization."

Indicators and objectives

Recognizing the size of the impacts that our business activities have on the global environment, we are committed to promoting renewable energy, effective use of nuclear power generation and improving the efficiency of thermal power generation, all of which are designed to promote decarbonization.

Our Group's targets

Halve CO₂ emissions associated with power generation in Japan in FY2030 (compared to FY2013)

Achieve 6 million kW of installed capacity by 2030s (2 million kW or more new development in Japan and abroad)

Keep the top spot for the amount of CO₂-free power generation

Scenario Analysis

Referring to three scenarios based on two axes (technological advancement and decarbonization policies), we are implementing Scenario Analysis according to data provided by the IEA* and other institutions, the details of which will be included in an integrated report.

* International Energy Agency

Performance data

GHG emissions (non-consolidated)		Unit	FY2017	FY2018	FY2019
Direct greenhouse gas emissions (Scope 1)*1*2*3		10,000 t-CO2	3,281.4	2,865.7	2,663.2
Electricity indirect gree	nhouse gas emissions (Scope 2) ^{*1*2*4}	10,000 t-CO2	1.0	0.6	0.5
Other indirect greenho	use gas emissions (Scope 3)*1*5	10,000 t-CO2	3,115.1	3,784.5	3,173.9
	Category 1*6		129.6	123.2	142.7
	Category 2*7		80.0	102.6	129.3
	Category 3*8		2,903.2	3,556.6	2,900.0
	Category 4 ^{*9}		0.1	0.1	0.0
	Category 5 ^{*10}		1.2	1.1	1.0
	Category 6 ^{*11}		0.3	0.3	0.3
	Category 7 ^{*12}		0.8	0.6	0.6
	Category 8 ^{*13}	10,000 t-CO ₂	—	_	_
	Category 9 ^{*13}		—	_	—
	Category 10 ^{*13}		—		—
	Category 11 ^{*13}		—		—
	Category 12 ^{*13}		_		_
	Category 13 ^{*13}				
	Category 14 ^{*13}		—	_	
	Category 15 ^{*13}		_		

*1 The amount of greenhouse gases emitted in our entire supply chain is calculated in accordance with the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (ver. 2.3) issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry. *2 GHG emissions (non-consolidated) in fiscal 2019 include those of Kansai Transmission and Distribution, Inc., which was later spun off.

*3 Direct GHG emissions (Scope 1) refer to emissions (energy-derived CO₂, SF₆ and N₂O emissions) reported by electric companies in line with the Law Concerning the Promotion of the Measures to Cope with Global Warming along with CO₂ emissions from transportation fuel use, which are excluded from the reporting obligations. SF₆ emissions are based on the calendar year *4 Electricity indirect GHG emissions (Scope 2) include CO2 emissions originating from electricity and heat purchased from external corporations, which should be reported by electric operators in line

with the Law Concerning the Promotion of the Measures to Cope with Global Warming. For electricity, adjusted factor was used.

*5 Indirect emissions not covered by Scope 1 or Scope 2 (emissions from other corporations related to the business activities of the company concerned)

*6 Product/service price (purchased or obtained) × emission intensity

*7 Capital goods price × emission intensity

*8 Fuel consumption × emission intensity + electricity purchased externally × emission factor

*9 Fuel consumption × emission intensity

*10 Waste disposal volume × emission intensity + fuel consumption × emission intensity

*11 Number of employees × emission factor

*12 (City classification-based) Σ (number of employees × operating days × emission intensity)

*13 Not applicable because of specific to our business

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Pow	er Group Kansai Electric Power Co., Inc.	Kansai Transmission and Distribution, Inc.

The Group's CO2 emissions and their factors associated with power generation in Japan	Unit	FY2017	FY2018	FY2019
CO ₂ emissions ^{*1}	10,000 t-CO ₂	3,420	3,040	2,850
CO_2 emission factor (at the generation end) (per power generation output) ^{*2}	kg-CO2/kWh	0.357	0.287	0.287

CO₂ emissions refer to those produced by fuel combustion at the Group's thermal power plants in Japan.
 CO₂ emission factor (at the generation end) corresponds CO₂ emissions per kWh of the Group's domestic power generation business
 CO₂ emission factor (at the generation end) = CO₂ emissions of the Group's domestic power generation business + amount of power generated

CO2 emissions and retail emission factors of our Company	Unit	FY2017	FY2018	FY2019
CO ₂ emissions (before adjustment) ^{*1}	10,000 t-CO2	5,018	4,153	3,844
CO ₂ emissions (after adjustment) ^{*2}	10,000 t-CO ₂	4,822	3,936	3,594
CO_2 emission factor (energy used) (before adjustment) (per amount of electric power sold)* ³		0.435	0.352	0.340
CO ₂ emission factor (energy used) (after adjustment) (per amount of electric power sold)* ³	Kg-CO2/KVVN	0.418	0.334	0.318

*1 CO2 emissions refer to those produced by fuel combustion at the thermal power plants and include those for power purchased from other corporations.

CO2 emissions refer to those produced by fuel combustion at the thermal power plants and include those for power purchased from other corporations.
 Adjusted CO2 emissions include the environmental value adjustments under the surplus solar power purchasing system and the renewable energy feed-in tariff system.
 CO2 emissions (before adjustment) + CO2 emissions (after feed-in tariff adjustment, etc.)
 CO2 emission factor (energy used) (before adjustment) = CO2 emissions (before adjustment) + amount of electric power sold
 CO2 emission factor (energy used) (after adjustment) = CO2 emissions (after adjustment) + amount of electric power sold
 CO2 emission factor (energy used) (after adjustment) = CO2 emissions (after adjustment) + amount of electric power sold
 CO2 emission factor (energy used) (after adjustment) = CO2 emissions (after adjustment) + amount of electric power sold
 CO2 emission factor (energy used) (after adjustment) = CO2 emission factor will be officially announced by the government in accordance with the Law Concerning the Promotion of the Measures to Cope with Global Warming, etc.

Greenhouse gases other than CO ₂ (non-consolidated)	Unit	FY2017	FY2018	FY2019
N2O (dinitrogen oxide)*1	10,000 t-CO ₂	2.8	2.4	2.3
SF6 (sulfur hexafluoride)*1*2	10,000 t-CO2	4.6	5.1	3.8

*1 CO₂ equivalent

*2 SF6 emissions are based on the calendar year

Utilization rate of nuclear power facilities and net thermal efficiency of thermal power facilities, both operated by our Company	Unit	FY2017	FY2018	FY2019
Utilization rate of nuclear power facilities ^{*1}	%	18.0	54.6	48.4
Net thermal efficiency of thermal power facilities ^{*2}	%	48.3	49.0	48.6

*1 Utilization rate of nuclear power facilities = amount of power generated ÷ (permitted output × calendar hours) × 100

*2 Net thermal efficiency of thermal power facilities = (amount of power transmitted × quantity of heat per kWh) ÷ total amount of input heat (lowest heat value standard) × 100

Energy consumption (non-cons	Unit	FY2017	FY2018	FY2019	
Total energy consumption ^{*1}	1,000 GJ	554,656	492,321	460,060	
Coal		1,000 t	4,288	3,455	3,305
	Heavy oil	1,000 kL	157	136	48
	Crude oil	1,000 kL	345	194	30
I hermal fuel consumption	LNG	1,000 t	7,287	6,734	6,502
	Wood pellets	1,000 kL	16	2	0.2
	Other	(heavy oil equivalent)	361	288	202
Fuels for nuclear power generation (weight of pre-irradiation uranium)*2		tU	37	87	52

*1 These figures are reported to the government in accordance with the Act on the Rational Use of Energy. (Fossil fuel consumption, purchased electricity, and purchased heat)

*2 Data exclusive to our Company

Environment

Socia

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Pollution Prevention

Steadily implementing local environmental protection measures, including preventing air and water pollution, dealing with asbestos issues and preserving biodiversity, we are also strictly managing chemical substances.

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

<Kansai Electric Power Group Environmental Action Policy 3. Promotion of environmental protection in local communities>

3. Promotion of environmental protection in local communities

- We are committed to conserving the local environment by implementing the following:
- (1) Measures to prevent air and water pollution, etc.
- (2) Efforts to strictly manage and reduce toxic chemicals
- (3) Considering the preservation of biodiversity

• • • Goals • • •

Measures to prevent air pollution

Maintaining current sulfur oxide (SOx) emissions per power output

Emission factor: Maintaining the world's lowest levels, Emissions: Complying with the standards as agreed for each power plant Results: 0.021 g/kWh (consolidated), 0.036 g/kWh (thermal power generation), with all agreed standards met

Maintaining current nitrogen oxide (NOx) emissions per power output

Emission factor: Maintaining the world's lowest levels, Emissions: Complying with the standards as agreed for each power plant Results: 0.043 g/kWh (consolidated), 0.074 g/kWh (thermal power generation), with all agreed standards met

Efforts **

Air pollution prevention measures (SOx, NOx, soot)

Our Company has implemented measures aimed at reducing the volume of SOx (sulfur oxides) emitted by our thermal power plants by using low-sulfur fuels, installing sulfur scrubbers, and other measures. To address the issue of NOx (nitrogen oxides), we are taking steps to lower emission levels, such as improving combustion methods and installing nitrogen scrubbers. As a result, our SOx and NOx emissions per unit of electric power generated are significantly lower than those of the major countries of Europe and North America, remaining among the lowest in the world. In addition, we have installed high-performance electrostatic precipitators that dramatically cut soot emissions.



SOx and NOx emission factors for thermal power generation of major countries and Kansai Electric Power



Source: Aggregated data based on OECD Stat. website (OECD) and World Energy Balances 2019 (IEA); excludes Kansai Electric Power Company

ility for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Powe	er Group Kansai Electric Power Co., Ind	Kansai Transmission and Distribution, Inc.

Handling chemicals

Sustainabi

We regularly monitor the status of buildings and equipment that contain asbestos and systematically advance the removal of asbestos and replacement with non-asbestos products. In these ways, we are managing asbestos suitably as we strictly abide by related laws, regulations and other rules.

Moreover, in addition to abiding by the PRTR (Pollutant Release and Transfer Register) System, we are working actively to manage toxic chemicals strictly and to reduce them.

Scope of use (buildings and facilities) of asbestos

ltems t	argeted	Type of use	Present conditions (usage)
Blown-in materials containing asbestos		Acoustic insulation, thermal insulation, and fireproofing materials in company buildings; acoustic insulation for transformers	 Company buildings 286 buildings (about 4% of total) Acoustic insulation for transformers 27 units (about 1% of total)
	Building materials	Fireproofing panels, roofing materials, flooring for buildings, etc.	• Company buildings May include building materials used before August 2006
	Asbestos- cement pipes	Duct wiring for underground wires (transmission, distribution, and communications facilities)	 Transmission ducts Approx. 661 km (route length) (about 42% of total length) Distribution ducts Approx. 575 km (route length) (about 5% of total length) Communications ducts Approx. 2.6 km (route length) (about 10% of total length)
Asbestos- containing products	Thermal insulation	Power generation facilities (thermal power facility, nuclear power facility)	• Remaining products containing asbestos Thermal power: Approx. 79,734 m ³ (about 22% of total) Nuclear power: Approx. 2,065 m ³ (about 21% of total)
	Sealing materials, gaskets	Power generation facilities (thermal power facility, nuclear power facility)	 Sealing materials (remaining products containing asbestos) Thermal power: Approx. 33,000 (about 29% of total) Nuclear power: Approx. 6,700 (about 4% of total) Gaskets (remaining products containing asbestos) Thermal power: Approx. 4,400 (about 10% of total) Nuclear power: Approx. 16,000 (about 8% of total)
	Buffers	Suspension insulators for transmission facilities, etc.	 Transmission facilities Approx. 570,000 (about 12% of total) Distribution facilities 792 (about 1% of total)
	Thickeners	Electric wire for overhead transmission lines, hydroelectric dams	 Transmission facilities Approx. 124 km (distance) (about 1% of total length) Part of asphalt-surface impervious wall for dam structure 1 facility (Tataragi Dam)
	Insulation materials	Main motors and main circuit fuses of electric locomotives	 Main motor: 4 locomotives (4 units/locomotive) Main circuit fuse: 4 locomotives (1 unit/locomotive)

Note: The figures in the table reflect the use of asbestos in buildings and facilities as of the end of March 2020.

Performance data

Atmospheric emissions and drainage (non-consolidated)	Unit	FY2017	FY2018	FY2019
SOx emissions ^{*1}	t	2,734	2,351	2,138
SOx emission intensity (at the generation end) $*^2$		0.028	0.022	0.021
SOx emission intensity (per thermal power output) (at the generation end) *3	g/kWh	0.039	0.037	0.036
NOx emissions ^{*4}	t	5,402	4,686	4,414
NOx emission intensity (at the generation end)*5		0.055	0.043	0.043
NOx emission intensity (per thermal power output) (at the generation end) $*^{\circ}$	g/kWh	0.077	0.074	0.074
Ozone depletion emissions	t-CO ₂	407	971	1153
HCFC	+ CO	407	966	690
Other	1-CO2	0	5	463
COD emissions ^{*7}	t	18	21	22

*1 This is calculated from amounts of sulfur in fuel as well as SOx concentrations in gas emissions (measured values) and gas emission volumes. (Some previous fiscal year amounts were calculated

from the amount removed by desulfurization equipment.) *2 SOx emission intensity (at the generation end) = SOx emissions ÷ power output (at the generation end)

- *3 SOx emission intensity (per thermal power output (at the generation end)) = SOx emissions ÷ thermal power output (at the generation end)
- *4 This is calculated from SOx concentrations in gas emissions (measured values) and gas emission volumes.

*5 NOx emission intensity (at the generation end) = NOx emissions ÷ power output (at the generation end) *6 NOx emission intensity (per thermal power output (at the generation end)) = NOx emissions ÷ thermal power output (at the generation end)

*7 This is calculated from analyzed wastewater concentration values.

Sustainability for the Kansai Electric Power Group	Environment	Social		Gover	rnance
	Kansai Electric Pow	er Group Kansai Elect	ric Power Co., Inc.	Kansai Transmissi	on and Distribution, Inc.
Resource Circu	lation	U.A.		N	

Policy and Concept

In accordance with the aims stated in the Kansai Electric Power Group Environmental Action Policy, our Group is working actively to reduce emissions and recover resources. For industrial waste generated from our business activities, our Group is undertaking proactive 3R (reduce, reuse, recycle) efforts with the goal of achieving zero emissions. For ordinary garbage such as copy paper and other office waste, we are also conducting 3R efforts with sorting as the foundation in each business place. Efforts are also underway to promote safe, reliable, and complete disposal of PCB wastes and to promote green procurement.

<Kansai Electric Power Group Environmental Action Policy 2. Initiatives contributing to the realization of a recycling-oriented society>

2. Initiatives contributing to the realization of a recycling-oriented society

- Our efforts to contribute to realizing a recycling-oriented society include the following:
- (1) Promotion of proactive 3R efforts aimed at zero emissions
- (2) Promoting safe, reliable, and complete disposal of PCB wastes
- (3) Promoting green procurement

Promoting green procurement

The Kansai Electric Power Group Green Procurement Manual is designed to contribute to creating a recycling-oriented society.

Green procurement concept

- (1) Given that all procured goods or all machines and methods used for construction have an environmental impact, wherever possible we will opt for environmentally friendly office supplies, materials, equipment and construction machines/methods.
- (2) The concept is to "rethink" whether goods to be purchased are necessary at all, "reduce" the amount of purchase as much as possible, "reuse" unused goods at other locations (including extended use of purchased goods), "recycle" resources and "repair" things wherever possible.

**** Goals * ***

Maintaining industrial waste recycling rate

99.5%

Proper processing of PCB wastes

Proceed with certainty to achieve processing before the legal deadline

Efforts **

Efforts to achieve zero emissions

The principal types of industrial waste generated by our Group include coal ash from coal-fired thermal power plants and concrete pole fragments remaining from power grid construction. In order to achieve zero emissions, we set a target for our Group of "a 99.5% or higher recycling rate" for industrial waste, and we are advancing efforts that include recycling all coal ash as raw material for cement and paving material for roads, for example. We achieved a 99.8% recycling rate in fiscal 2019, which marks the tenth consecutive year that we have reached our target. We are also working to reduce and recycle general waste, such as copy paper, produced by our offices.



 Changes in emissions and recycling rates for industrial wastes

Sustainabilit	y for the	Kansai	Electric	Power	Group
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Environment

(Kansai Electric Power Co., Inc.) (Kansai Transmission and Distribution, Inc.

• Safe, proper disposal of PCB

In line with relevant laws and regulations such as Law Concerning Special Measures Against PCB* Waste, we have a program in place to dispose of all equipment containing PCB (transformers, capacitors, fluorescent ballasts, etc.) safely and properly according to their characteristics.

Disposal of high-level PCB

Equipment containing PCB (transformers, capacitors, fluorescent ballasts, etc.) is investigated retrospectively, referring to information on high-level PCB provided by the government and electric manufacturers; high-level PCB, if identified, is disposed of by the Japan Environmental Storage & Safety Corporation (JESCO) in accordance with the national PCB Waste Treatment Basic Plan. The deadline is approaching for the disposal of high-level PCB at the Group's business locations. The search is ongoing to avoid discovery of high-level PCB after the deadline expires. All high-level PCB is expected to be disposed of properly.

Disposal of low-level PCB

We established the Recycling Center for Utility Pole Transformers in 2003 while soliciting consent from local residents and municipalities on disposal of low-level PCB; insulating oil and transformer cases contaminated with PCB were detoxified for recycling purposes, with treatment of these materials in storage completed by July 2015.

Meanwhile, equipment containing insulating oil (transformers in operation at power plants and substations, pole transformers in distribution facilities, etc.) is routinely inspected for maintenance purposes (regardless of the presence or absence of PCB) to ensure proper operation. Additionally, measures are in place in the event of the unplanned release of insulating oil due to natural disasters (typhoons, lightning strikes, etc.), where spillages are prevented and contamination is contained to minimize impacts on the environment.

Moreover, all equipment in operation is inspected for possible PCB contamination and properly treated according to its type, size and PCB levels, leveraging certified detoxifying business contractors authorized by the Minister of the Environment (Kanden Engineering Corporation's Solvent Cleansing Method, etc.), treatment facilities operating under license from prefectural governors, and the energized natural circulation washing technology in compliance with government procedures.

* Poly Chlorinated Biphenyl. PCB was widely used for transformer insulating oil, etc. because of its excellent properties as an electrical insulator. However, due to PCB being a hazard to ecosystems, production and use have since been largely banned. More often than not, high-level PCB was intentionally used while low-level PCB was accidentally mixed in.

Performance data

	Waste-related (non-consolidated)*1	Unit	FY2017	FY2018	FY2019
Amount of industrial waste and other emissions			653.6	580.0	621.3
	 Soot particles (heavy/crude oil ash, coal ash, etc.) 		438.3	387.0	384.7
	•Sludge (desulfogypsum, waste water processing sludge, etc.)		130.3	107.9	129.7
	•Cinders		28.6	25.3	45.8
	Demolition debris (waste concrete utility poles, etc.)		16.5	18.2	18.1
	•Metal scraps	1 000 t	29.1	23.9	25.5
	•Glass/ceramic scraps (thermal insulation scraps, insulator scraps, etc.)	1,000 t	1.8	1.3	2.4
	•Waste oil		1.8 2.2 0.9 592.7 6	3.0	4.1
	•Waste plastic		0.9	0.9	1.4
	•(Repeated) Ash and gypsum		592.7	515.7	553.2
	•Other		6	12.6	9.6
	(Repeated) Special controlled industrial waste		5.5	8.3	7.1
Amount of industrial waste for landfill disposal			0.9	0.9	1.1
	•Glass/ceramic scraps (thermal insulation scraps, insulator scraps, etc.)		0.06	0.09	0.19
	Sludge (wastewater processing sludge, etc.)		0.19	0.48	0.41
	Demolition debris		0.03	0.03	0.00
	•Cinders	1.000 t	0.00	0.00	0.00
	•Waste plastic	1,000 L	0.05	0.10	0.27
	•Metal scraps		0.19	0.05	0.03
	•Other		0.42	0.14	0.20
	•(Repeated) Amount except for special controlled industrial waste		0.52	0.77	0.95
Industrial waste recycling rate ^{*2}		%	99.9	99.8	99.8
	Ash and gypsum waste recycling rate*2	%	100	100	100
Amo	unt of PCB waste ^{*3}	1,000 t	4.7	7.4	6.6
Amo	unt of high-level PCB processed (cumulative total)*4	units	5,073	5,241	5,365

*1 The totals may not match up due to rounding.

*2 Industrial waste recycling rate = [(industrial waste and other emissions - amount of landfill disposal) ÷ (industrial waste and other emissions)] × 100

*3 Amount of detoxified PCB waste in landfill (high/low-level PCB) + recycled amount

*4 Number of transformers and capacitors containing high-level PCB, detoxified by JESCO

Efforts Toward Conserving Biodiversity

Policy and Concept

Our efforts are in accordance with the Kansai Electric Power Group Environmental Action Policy, which emphasizes biodiversity-conscious business activities. Moreover, in line with the Biodiversity Action Guidelines of the Japanese Electric Utility Industry, which were set by the Federation of Electric Power Companies of Japan, we are expanding operations while recognizing the importance of biodiversity. For instance, when building or renovating power plants in areas of sensitive biodiversity, as much as possible we strive to prevent or reduce any impact on the environment and biodiversity in accordance with the Environmental Impact Assessment Law and where necessary we also consider undertaking restoration measures.

• Biodiversity Action Guidelines by the Japanese Electric Utility Industry (revised on June 2020)

In the electric power business, we are committed to using the blessings of nature in a sustainable manner while minimizing the impact on biodiversity.

In view of the "integration of business activities and environmental measures" encompassing a wide range of environmental activities, or so-called "environmentally integrated management" that has been required recently, we have revised the Biodiversity Action Guidelines by the Japanese Electric Utility Industry.

Based on these Action Guidelines, we will continue to strive for sustainable business activities while appreciating the blessings of nature.

Code of Conduct

As a member of the international and local communities, not just as an electric power company, we keep in mind that biodiversity is an important foundation of a sustainable society and realizing such a society is our responsibility. We will actively promote the following business activities that bring benefits to biodiversity, thereby realizing a sustainable society.

I. Promoting environmentally integrated management that contributes to biodiversity

- (1) When supplying electricity, carry out corporate management while recognizing the effects of business activities on achieving various goals related to SDGs with due consideration to biodiversity.
- (2) In order to reduce greenhouse gas emissions in the electric power industry as a whole, make utmost efforts to use nuclear power generation with the basic premise of ensuring safety, increase the use of renewable energies, further improve efficiency and perform appropriate maintenance of thermal power generation, and provide energy-saving and CO₂-saving services that contribute to a low-carbon society.
- (3) Continue to engage in 3R (Reduce, Reuse, Recycle) activities, such as effective use of resources and reduction of final waste disposal, to create a recycling-based society and reduce environmental load.
- ④ Regarding biodiversity efforts, deliver easy-to-understand information and dialogue appropriately to a broad base of stakeholders.

II. Steadily engaging in actions that contribute to biodiversity

- (5) When conducting business activities, properly assess, analyze and evaluate the impact on biodiversity, and strive for conservation and sustainable use.
- (6) Promote technologies and R&D that contribute to the conservation and sustainable use of biodiversity, and seek to disseminate them.
- ⑦ Work to conserve biodiversity by voluntarily and proactively engaging in activities that lead to the creation of social value, such as forest conservation and environmental education, while cooperating and collaborating with relevant local organizations and customers. At the same time, contribute to achieving SDGs.
- (8) Encourage employees to enhance their awareness of biodiversity by participating in environmental education and environmental conservation activities inside and outside the company.
- Provide environmental education activities to customers and the next generation, and participate in and cooperate with educational activities performed in the community to widely spread awareness of biodiversity.

Goals **

Conservation of biodiversity Consideration of biodiversity through business activities

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Pow	rer Group Kansai Electric Power Co. Inc	Kansai Transmission and Distribution. Inc

• • • Efforts • • •

• Examples of specific efforts related to Biodiversity Action Guidelines by the Japanese Electric Utility Industry II – (5)

In the Kurobe Dam area, we have been working on the protection of native species from the viewpoint of nature preservation. In fiscal 2019, we examined the vegetation status around the Kurobe Dam again through literature references and field surveys. Based on the results, we will go on with further study on biodiversity conservation activities.

Protecting native species around Kurobe Dam

Our Company runs electric buses along the Tateyama Kurobe Alpine Route that connects Nagano Prefecture and Toyama Prefecture. Along with not emitting exhaust gases, these vehicles rarely startle animals with their sound because they run extremely quietly.

Kurobe Dam, which is situated in a national park, receives one million visitors annually. At Ogizawa Station, which is the entrance to the Nagano Prefecture side, the seeds of plants that do not naturally grow in Kurobe sometimes get brought over on the soles of the shoes of tourists. Thus, we have placed seed removal mats at the station ticket gates to prevent the influx of non-native species. The removal seeds are collected with a vacuum cleaner and incinerated.



Seed-removal floor mat

Execution of environmental impact assessment

An environmental impact assessment system estimates and evaluates impacts on the environment of business activities and investigates necessary countermeasures before the execution of large-scale development projects. In Japan, the system based on the Environmental Impact Assessment Law stipulates subject business survey items, procedure protocols, and other requirements. In suitably implementing environmental impact assessment for power plant construction (including new and expansion) in the electric power business, along with utilizing the extensive knowledge that we had accumulated before the establishment of this law, we are, for example, listening to the opinions and recommendations of local residents, regional organizations and the national government. Furthermore, through environmental protection measures based on the opinions of experts and others, we are making efforts to minimize impacts on the natural environment and biodiversity as well as restore natural environments.



Environmental assessment procedures

• Examples of specific efforts related to Biodiversity Action Guidelines by the Japanese Electric Utility Industry II – 곗

Natural forest creation

In order to make forests that are similar to nature at power plants in a short period of time, we are trying to create environments that protect the original biodiversity of the region by selecting cultivated tree saplings that are suited to the region, and planting different species densely in close proximity.

Moreover, in order to maintain natural forests, as we look to the guidance of experts, we are undertaking continuous efforts to preserve biodiversity, including measures to further diversify species and eliminate invasive species.

Protecting oriental white storks

In Toyooka City, Hyogo Prefecture, released oriental white storks, which are designated a Special Natural Treasure in Japan, sometimes make their nests on utility poles and steel towers. Not only are there concerns about accidents, but there are also fears that storks could be electrocuted. For these reasons, Kansai Transmission and Distribution, Inc. patrols carefully, removing nests as quickly possible and conducting measures to discourage them from coming near utility poles in cooperation with the local governments. In these ways, we are both protecting the storks and maintaining the safety and stability of the power supply.



Policy and Concept

A physical shortage of water has an impact on our business. Specifically, restrictions on the supply of drinking and industrial water could have an impact on the operations of water-dependent thermal and nuclear power plants.

Thermal and nuclear power plants use massive amounts of water; seawater is used for cooling purposes while about half of a power plant's water (excluding cooling water) is supplied by seawater desalination facilities.

Meanwhile, the results of water risk assessments conducted at our power plants show that there is no significant risk associated with drought.

While drought poses little risk to our power plants in Japan, we will continue to work on the proper use of water resources and risk management.

At the same time, group-wide efforts will be made to minimize office water use (as part of the Kansai Electric Power Group Eco Action).

Goals **

Reducing office water consumption

Reduce as much as possible

Efforts + +

Water risk assessments

The results of water risk assessments conducted at our power plants show that they are not at significant risk of a water shortage; resources include tools provided by the World Resources Institute (WRI)* and information obtained from external experts. * An independent organization that researches policies on issues related to the global environment and development, as well as providing technical support.

Performance data

Water consumption by our Company		Unit	FY2017	FY2018	FY2019	
Total net fresh water consumption ^{*1}			5.35	5.19	3.97	
River water			0.36	0.40	0.41	
	Groundwate	?r		0.00	0.00	0.00
	Total municipal water supplies Amount of industrial water used (for power generation)	million m ³	4.99	4.79	3.56	
			3.85	3.70	2.64	
		Amount of service water used (for power generation)		1.14	1.09	0.92
Seawater (desalinated)*2			2.63	2.74	2.92	
(Repeated) Office	e water consur	nption	1,000 m ³	452	426	413

*1 Excluding desalinated seawater

*2 Desalinated seawater

S Social

- Human Rights
- Labor Practices
- Occupational Health and Safety
- Human Resources Development
- Responsibilities Toward Customers
- Disaster Mitigation Efforts
- Communities
- Supply Chain Management



Respect for human rights

Policy and Concept

As part of its CSR Action Principles, our Group has established conduct standards regarding human rights, upholding "Respect for Human Rights and Development of Favorable Work Environment by Taking Advantage of Diversity." We recognize human rights as a common and universal value of a global society, and we are committed to compliance with the laws and regulations of each country or region in which we operate. With the upmost respect given to international norms to protect human rights, we are promoting respect for human rights throughout the supply chain.

> Conduct Standards regarding Human Rights (excerpt taken from CSR Action Principles 4. Conduct standards for individuals)

- Respect the human rights of every individual with a stake in business activities.
- Never say or do anything that is discriminatory, harassing, defamatory or taunting or that could otherwise cause another person to feel uncomfortable based on race, nationality, religion, gender, sexual orientation, sexual identity, social position, family background, occupation, disability or other personal trait. Moreover, do not sympathize with such words or behavior or allow them to pass.
- Never involve in any kind of forced labor or child labor.

System **

• System for the promotion of human rights education

With the Promotion Committee for Human Rights Education established at the respective head offices and business activity bases in each region, our Company and Kansai Transmission and Distribution, Inc. formulate basic plans for human rights education for the year to come, as well as confirming how human rights awareness raising efforts and training programs are being implemented. In addition, we share information on various human rights issues and promote initiatives for respecting human rights across the Group.

Director responsible: Nobuyuki Miyamoto (Executive Vice President)



Environment

Governance

Goals **

- Kansai Electric Power 2020 Basic Plan for Human Rights Education
- Kansai Transmission and Distribution 2020 Basic Plan for Human Rights Education

Promote human rights training with the goal of having all employees receive training at least once a year.

2019 Results: Frequency of training attendance per person (20,441 employees attended)

Efforts

Efforts to raise human rights awareness

We provide human rights training to management and all employees on a continuous basis to deepen their understanding and recognition of our corporate responsibility to respect human rights, and to enable each and every employee to take responsible action in all business activities. Regarding harassment prevention, we hold workplace discussions based on case examples every year throughout the company to create a workplace climate that does not permit any kind of harassment. In addition, we pay careful attention to routine internal practices from the perspective of respect for human rights and conduct appropriate reviews as necessary.

Characteristic training and attendance

Training details	Target person	Attendance
Human Rights Lectures (IT innovation and evolution; new human rights issues)	Upper management, promotion members, officers and others	170
LGBT: Basic Knowledge	Promotion members	65



Note: The Harassment Counselor Training program has been suspended to prevent the spread of the novel coronavirus. Human rights lectures

Initiatives linking our Group, municipalities and other entities

Twice a year, the Kansai Electric Power Group holds Human Rights Information Exchange Meetings for Group Companies to promote initiatives for respecting human rights. In addition, we actively participate in the activities of the Osaka City Council on Human Rights Promotion for Corporations and other liaison group organizations, as well as those at the national and local government level.

Relevant data

Policy		
Policy pertaining to the respect for human rights	Established	Included in the Kansai Electric Power Group CSR Action Charter

Policy pertaining to the respect for human rights Established https://www.kepco.co.jp/sustainability/csr/mind/charter/index.html

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Promotion of diversity

Policy and Concept

We established an exclusive organization in 2011 intended for all employees with the goal of raising awareness and promoting behavioral changes in order to promote the advantages of individual differences as one of our strengths. We are promoting initiatives such as workplace training and the periodic release of information intended to forge the power of the individual as an organizational strength.



• Kansai Electric Power Group Diversity Promotion Policy (established in December 2015)

- 1. By respecting the "differences" of each individual and making diverse senses of value and ways of thinking into sources of strength for the organization, we will realize a competitive corporate group that creates new value.
- 2. We seek to realize workstyles and to cultivate workplace environments that enable everyone to exercise their abilities to their maximum extents, regardless of their personal attributes, including gender and age, or experienced life events.

System **

Diversity promotion

Director responsible: Nobuyuki Miyamoto (Executive Vice President) Management office: Diversity Promotion Group, Office of Human Resources and Safety Management

• • • Goals • • •

- Appointment to managerial positions: By the end of fiscal 2030, increase the ratio and the number of female managers to more than threefold those of fiscal 2018.
 - ightarrow Fiscal 2019 results: Female manager ratio was 2.4%, and the number of female managers was 47.
- Recruitment: Achieve ratios of 40% or more for women employed in office jobs and 10% or more for women employed in technical jobs.
 → Fiscal 2020 results: Office workers 38.9%, Engineers 7.6%

Note 1. All figures are on a non-consolidated basis.

Note 2. The Kansai Electric Power Co., Inc. and Kansai Transmission and Distribution, Inc. conducted collective recruitment.

stainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Power G	Group Kansai Electric Power Co., I	nc. (Kansai Transmission and Distribution, Inc.)

Efforts **

Su

• Promotion of employment of persons with disabilities

In 1993 we established Kanden L-Heart Co., Inc. as a special affiliate company, and together with Kansai Transmission and Distribution, Inc.* (which was split off in April 2020) these organizations encourage employment of people with disabilities. As a result, our employment ratio of workers with disabilities reached 2.6% (as of June 1, 2020), having continuously achieved the legally required ratio (2.2%). In addition, we are opening up a diverse range of job positions where people with disabilities can play an active role, such as office assistant, while bolstering support for those with mental disabilities.

* Kansai Transmission and Distribution, Inc. has been certified as a special affiliate (as our Group) and therefore is included in the calculation of our employment ratio of persons with disabilities.

Promotion of employment of elderly persons

In accordance with the objectives of the Act on Stabilization of Employment of Elderly Persons, we introduced a system for re-employing retired employees in 1996. Currently, more than half our employees who have reached retirement age are participating by applying their extensive expertise and skills.

Initiatives to encourage the further success of female employees

In addition to encouraging continuous contributions to the organization by developing abilities and growing independently through work, we are striving to make environments where people can continue to work enthusiastically even when their lifestages change. Our Company supports and has signed the Women's Empowerment Principles, which were created by UN Women and the United Nations Global Compact. We received the "Kurumin" certification in accordance with the Act on Advancement of Measures to Support Raising Next-Generation Children and the highest "Eruboshi" certification (third level) in accordance with the Act on Promotion of Women's Participation and



[&]quot;Semi-Nadeshiko" of the Nadeshiko Brand

Advancement in the Workplace. In addition, we were recognized as a "Leading company for female activity in Osaka City." Moreover, in the selection of "Nadeshiko Brands" instituted jointly by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange, we were selected as a "Semi-Nadeshiko Brand."

Targets for promotion of female employees

Appointment to
managerial positionsBy the end of FY2030, increase the ratio and the number of female managers to more than threefold those of FY2018.RecruitmentAchieve ratios of 40% or more for women employed in office jobs and 10% or more for women employed in technical jobs.



Number and ratio of female managers

*Excludes medical staff and transportation staff

Number and ratio of female hires



Promoting the participation of male employees in childrearing and housework

With the aim of increasing male participation in childrearing and housework, we are encouraging male employees and their superiors to take childrearing leave. When the period of childrearing leave begins, the provision allows for seven days of paid leave.



^{*}Managerial positions refer to those equivalent to chief clerk and higher

Kansai Electric Power Co., Inc.

(Kansai Transmission and Distribution, Inc

Promotion of workstyle innovation

Policy and Concept

Promotion of workstyle innovation, health and productivity management

The Company has established a Health and Productivity Management Declaration with the aim of expressing our unwavering commitment to step up efforts in health management. As part of our Medium-term Management Plan, we are accelerating our efforts in setting goals that each one of our employees shall aim to "master using time well" and "master maintaining good health". Going forward, we will remain oriented toward a workstyle that places weight on value creation whilst enhancing flexibility when it comes to time and place of work, as well as how employees choose to rest, so that they can benefit from self-improvement. Additionally, we will proactively support the physical and mental health enhancement of employees as well as aim to improve the quality of life of each employee and their families.

Health and Productivity Management Declaration (established in January 2018)

The Kansai Electric Power Company, in order to fulfill our mission, "continuing to serve our customers and communities," will promote the maintenance and enhancement of our employees' physical and mental health as well as the improvement of the quality of their lives by making employees' health one of the pillars on our corporate management.

We will also implement working practices which place an emphasis more on value creation than the amount of work time, boost productivity, eliminate longer working hours, promote workplace diversity, and realize dynamic innovation through human-capacity reform to further improve effectiveness of our health management.

Based on our belief that we value people, we will continue to promote the advancement of employees' health and contribute to "the realization of a bright and affluent future."

System **

Responsible for promotion: Takashi Mori (Representative Executive Officer, President) Deliberative body: Workstyle Innovation, Health and Productivity Management Committee Management office: Labor Health Group, Office of Human Resources and Safety Management

Goals **

- Reduce total working hours by 5% compared to FY2015.
 - \rightarrow FY2019 results: Reduced by 2%.
- Achieve male employee childrearing leave/paid leave utilization rate of 90% or higher.
 - \rightarrow FY2019 results: Male employee childrearing leave utilization rate was 109%, and paid leave utilization rate was 97.1%.
- Improve health indexes (weight, exercise, smoking, sleep and drinking) to the level of leading companies in health and productivity management.
 - → Achieved: Exercise, smoking, sleep Not achieved: Appropriate bodyweight, drinking habits

Efforts

Developing comfortable workplaces

On the premise that working hours are managed appropriately, a flexible work system with no core time is being put in place to clearly separate efficient working time ("on") from effective rest time ("off"); to this end, we are expanding flextime, enhancing a work system that allows for more flexibility when it comes to times/places of work through the introduction of telecommuting and encouraging employees to take leave in a planned and meaningful manner.

2015. 4 Introduction of anniversary leave	Granted special leave on anniversaries of employees or their families.
2016. 4 Introduction of telecommuting	Introduced to support improved work-life balance.
2016. 4 Introduction of partially paid childrearing leave	Seven days of paid leave for the purpose of encouraging male employees to take childrearing leave.
2018.10 Introduction of leave for spouse's overseas assignment	Introduced leave of absence program for employees who will accompany their spouse's overseas assignment.
2019.4 Introduction of rest between shifts	Encouraged employees to secure, basically, at least 11 hours of rest.
2019. 6 Introduction of satellite office work	Made available working at the nearest business location, etc. Also expanded requirements for telecommuting.
2020.4 Extension of super-flexible work hours	Abolished core time as a general rule at all business locations. (Has been abolished at some locations since April 2019.)

Major work system revisions in recent years

inability for the Kansai Electric Power Group	Environment		Social		Governance
	Kansai Electric Power G	roup	Kansai Electric Power Co., In	c.)	Kansai Transmission and Distribution, Inc.

• Certified as a Health & Productivity Management Outstanding Organization 2020 (White 500)

Having been recognized for our philosophy of "Management that values people" and health measures for employees, our company has been certified as a Health & Productivity Management Outstanding Organization (White 500) for the fourth consecutive year since 2017.



• Major efforts in Health and Productivity Management

To improve and raise awareness of health management and enhance self-care skills, we provide lectures on exercise and meals, introduced a health behavior support application and AJTA (beanbag toss) Game, a company-wide sport event. Additionally, we provide training for managers to develop an environment which makes it easier for superiors to support their subordinates. This support structure has also been enhanced by providing improved consultation with occupational health doctors and nurses as well as outside counselors.

• Sustaining stable labor-management relations

We have concluded a union shop agreement with the Kansai Electric Power Labor Union, and have set "company productivity increases accompanied by improved labor conditions" as a shared labor-management goal. Based on strong relationships of trust that we have constructed over our many years of history, we are building good labor-management relations. To keep up these relations, we continue to strive for mutual understanding by holding management panel discussions between labor and management as we operate business.

Major opportunities for labor-management communication

Management panel discussions	Labor and management promote communication in the corporate management plan, etc. (held annually)
Management Council	Labor and management discuss important matters, such as reorganization (as needed)

Tackling the novel coronavirus

In order to prevent the spread of the novel coronavirus, the Group has changed its work system so that all employees, in principle, can use staggered working hours, telecommute, or work from satellite offices. We have also introduced IT tools for teleworkers and are facilitating further utilization of telecommuting.

When going to work, we are strictly observing infection prevention protocols such as mask wearing whilst implementing measures to avoid the "Three Cs" - closed spaces, crowded places, and close-contact settings - such as keeping enough space between desks in the office environment.

Since it is expected to take time until the number of infections starts to die down and assuming a transition to society where we coexist with coronavirus, we will strive to achieve both infection prevention and sustainable business activities by considering an internet-driven transformation of how we work.

Sustainability	v for the	Kansai	Flectric	Power	Grour
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Environment

Kansai Electric Power Group

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Governance

Relevant data

Policy					
		Kansai Electric Power Group Diversity Promotion Policy https://www.kepco.co.jp/sustainability/csr/diversity/policy.html			
Diversity Promotion Policy	Established	Action Plan based on the Act on Promotion of Women's Participation and Advancement in the Workplace and the Act on Advancement of Measures to Support Raising Next-Generation Children https://www.kepco.co.jp/sustainability/csr/diversity/action_plan_woman.html			
		2018/3	2019/3	2020/3	
Number of analysis	non-consolidated	19,243	18,884	18,141	
Number of employees	consolidated	32,527	32,597	31,850	
Average age	non-consolidated	43.0	43.2	43.3	
Average length of service	non-consolidated	22.3 years	22.4 years	22.5 years	
Average annual salary	non-consolidated	7.57 million yen	7.91 million yen	7.99 million yen	
Rate of childrearing leave utilization among men*	non-consolidated	190.0%	142.2%	109.0%	
Rate of childrearing leave taken among women	non-consolidated	100%	100%	100%	
Rate of paid leave utilization	non-consolidated	96.1%	97.0%	97.1%	
Total working hours	non-consolidated	1,890.0 hours/year	1,910.3 hours/year	1,873.8 hours/year	
Turnover rate	non-consolidated	0.63%	0.74%	0.76%	
Ratio of workers with disabilities	non-consolidated	2.44%	2.51%	2.60%	
		2018/4	2019/4	2020/4	
Number of new hires	non-consolidated	320	322	373	

 \ast Men who took childrearing leave in each fiscal year / men who had babies born in the same year

Indexes related to female empowerment

		2018/3	2019/3	2020/3
Ratio of female employees	non-consolidated $*^1$	7.2%	7.5%	7.7%
	consolidated	_	_	12.5%
Ratio of female managers	non-consolidated*1	106 / 1.9%	112 / 2.1%	130 / 2.4%
	consolidated ^{*1}	-	—	680 / 5.8%
Average length of service for	non-consolidated*1	16.4 years	16.7 years	17.1 years
female employees	consolidated*1*2	-	—	8.7 years
		2018/4	2019/4	2020/4
	non-consolidated	48 / 15.0%	41 / 12.7%	51 / 13.7%
Number and ratio of female hires	office positions	21/42.9%	18/37.5%	28/38.9%
	technical positions	27 / 10.0%	23 / 8.4%	23 / 7.6%
	consolidated	_	_	166 / 21.6%

*1 Excludes transportation staff and medical staff
 *2 Average of companies at which female employee(s) is/are working (excluding some companies)

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Occupational Health and Safety

Efforts to eliminate industrial accidents

Policy and Concept

About the Kansai Electric Power Group Safe Action Charter

Based on the President's Declaration: "Ensuring safety is my mission, and the mission of the Company" and applying the lessons learned from the Mihama Nuclear Power Station Unit 3 accident, we are continuing with the implementation of safety efforts that put preserving the safety of every person involved in the Company's business activities first.

Inherent in the beliefs expressed in this declaration, safety first is set as a management criterion in our Management Philosophy. Under the Kansai Electric Power Group Safe Action Charter, we share "our beliefs about safety" as an everlasting group-wide principle to raise awareness of safety. Additionally, by practicing safe actions based on the Safe Action Declaration, we will steadily accumulate achievements in safety and cultivate an unwavering culture of safety.

System **

Director responsible: Kyoji Shimamoto (Executive Vice President) Deliberative body: Safety and Quality Board Management office: Safety Management Group, Office of Human Resources and Safety Management

**** Goals * ***

Preserve the safety of every person related with the Group and make Zero Accidents a reality.

Trend in accident frequency rate



Efforts **

Fostering an unshakable group-wide safety culture

Based on the lessons from the Mihama Nuclear Power Station Unit 3 accident, we are continuing safety efforts that put preserving the safety of every person involved in the business activities of our Group first. We share a strong belief that "we will not allow misfortune to occur to the colleagues who work with us or their families." We also deepen information sharing and communication. By doing these and other things, we are working to cultivate a group-wide safety culture that never wavers.

In order to further advance group-wide efforts to prevent accidents, we are pushing ahead with Kansai Electric Power Safety Culture Area activities. Specifically, we are fostering mutual understanding and sharing knowledge on safety through various meeting structures, etc. across the Group. We are also working closely with our group companies, including subcontractors, based on a reward system to commend subcontractors for creative and ingenious safety activities.

ability for the Kansai Electric Power Group	Environment	Social	Governance

Kansai Electric Power Group

Kansai Electric Power Co., Inc. (Kansai Transmission and Distribution, Inc.)

PDCA of safety activities

Sustain

To ensure safety for everyone related with our Group and achieve our unchanged goal, or "zero accidents," we are working to maintain safe working environments and prevent accidents from occurring and reoccurring through activities that mobilize the capacities of our organization with the full participation of employees. Concretely, as steps to prevent recurrence of accidents we had in the past, we analyze and evaluate the details of accidents that occur each year, have discussions among relevant internal departments including the management, and prioritize items to address on a group-wide basis.

We will seek continuous improvement by running the PDCA cycle of safety activities in each fiscal year. We will also share prioritized items to address with our group companies, thereby further enhancing the effectiveness of safety activities.

Prioritized items in safety activities for fiscal 2020

- ① Create a safe and secure working environment at each business site.
- ② Make it a habit to think safety and act safely based on danger prediction.
- ③ Promote safety activities based on bilateral communication with subcontractors, etc.
- ④ Practice safe driving behavior by all drivers and passengers as a unified effort of the workplace.

Specific safety efforts

Efforts in safety education and acquisition of knowledge from outside the company

To raise awareness of our employees and protect the colleagues of subcontractors and others, we provide education for each employee to practice autonomous safety activities. Besides that, we learn new things throughout our group companies in lectures and in training programs on safety led by external experts, thereby increasing the level of our Group's safety activities. As a result of these efforts, our accident frequency rate is lower than the national average.

Bilateral communication with subcontractors and others

When the opportunity presents itself, our employees visit equipment construction/maintenance sites and are active in creating and enhancing opportunities to communicate with subcontractors, etc. so that we can deepen mutual understanding and promote safety activities together. By proactively facilitating bilateral communication, we are striving to raise safety awareness and reduce the risk of accidents.



Bilateral communication with subcontractors and others

Thoroughly managing safe driving

For employees who drive cars, we have instituted our own Vehicle Operator Certification System, aiming for a safe driving level that is one step higher. After receiving education related to safe driving and practical training, they are given the vehicle operator certificate. We work to implement thorough and safe driving management by providing them with education and training periodically.



Thoroughly managing safe driving

Relevant data

Policy					
Occupational Health and Safety Policy Established		Safe Action Charter https://www.kepco.co.jp/energy_supply/supply/ichiisenshin/philosophy/chikai.html			
		Included in the Kansai Electric Power Group CSR Action Charter https://www.kepco.co.jp/sustainability/csr/mind/charter/index.html			
		Included in the Health and Productivity Management Declaration https://www.kepco.co.jp/sustainability/csr/working_style/working_01.html			
		2018/3	2019/3	2020/3	
Accident frequency rate	non-consolidated	0.29	0.43	0.42	
	subcontractors	—	—	Aggregation currently in process.	
Number of fatal accidents	non-consolidated	0	0	0	
Governance

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Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.
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Human Resources Development

Development measures for "human capital" innovation

Policy and Concept

• About the Kansai Electric Power Group Academy

We established the Kansai Electric Power Group Academy in 2018 and systematized our corporate training and education systems in order to actualize our company belief that "developing human resources is the most important thing for prevailing in a severe competitive environment" along with our Group philosophy of "management that values people."



*1: Director, Office of Corporate Planning, *2: Director, Office of Human Resources and Safety Management, *3: Division Manager of Each Division and President of Kansai Transmission and Distribution, Inc.

• Personnel development policies

At the Kansai Electric Power Group Academy, we implement capability development measures to empower each employee to be dynamic in their work by willingly taking on challenges to grow, so we can achieve high productivity and growth.

Specifically, we will provide training to foster awareness and change behavior in giving top priority to safety and fulfilling our corporate social responsibility (CSR). Along with that, a system is in place to enhance individual employees' strengths and improve or overcome challenges that require deeper understanding. Furthermore, we will implement personnel development measures to ensure that expertise is handed down to the next generation, as well as improving productivity and creating added value driven by digital technology.

Sustainability for the Kansai Electric Power Group	Environment		Social		Governance
	Kansai Electric Power G	roup	Kansai Electric Power Co., Ir	пс.	Kansai Transmission and Distribution, Inc.

Goals ***

• The "human capital" that we seek

We have formulated "human capital" as the characteristics desirable in employees in order to achieve sustainable growth for the Group.



Efforts

• Development measures for "human capital" innovation

As part of the personnel development measures through the Kansai Electric Power Group Academy, we support our employees who are looking to improve their abilities and advance in their careers by providing stratified training, specialized training to enhance their business expertise, as well as an executive candidate development program. Moreover, with the introduction of the personnel appraisal system and the in-house open system, our employees will have more willingness to grow and feel more motivated and rewarded.



Our training and development systems

Next generation leader development — Executive management candidate development

We are adopting outside training programs in order to develop early and systematically the next generation of leaders who will drive innovation. We are crossing conventional work divisions and incorporating interactions with different types of work as well as implementing curriculums that always link to business strategies.



DX personnel development — Strengthening expertise that will be a source of competitiveness

For the realization of digital transformation (DX), we are developing DX personnel as key people in their departments to advance efforts to increase productivity and generate added value utilizing digital technologies. Specifically, we are implementing on-the-job training (OJT) as well as "data analysis basic training" and "visualization tool utilization training" at K4 Digital Company and or at each department.

stainability for the Kansai Electric Power Group	Environment	Social	Governance

Kansai Electric Power Co., Inc.

Kansai Transmission and Distribution, Inc.

Kansai Electric Power Group

Support for self-growth

A variety of systems have been developed as an opportunity to motivate each employee to develop their abilities and make autonomous challenges.

• Major support systems

Certification bonus system	A system to provide money gifts to employees who passed the company-designated national exams for the encouragement of acquiring qualifications highly related to their work * Increased amounts of gift money are provided to those who acquired the company-designated important qualifications early
Challenge trainings	Application-based training to support employees who voluntarily strive to have a broader viewpoint in a wide range of fields, which is difficult in routine work
Outside correspondence education	Periodic encouragement of correspondence courses and e-learning designed to develop job performance skills and raise employees' cultural level

Adoption of an in-house application system (e-challenge system)

Supporting the independent career development of all individuals, we have implemented an in-house application system that allows employees to take on the challenges of diverse careers and fields. Based on high levels of motivation, they can exercise their abilities to their maximum extents even more than before.

Career challenges	Discover and develop new personnel with the strong motivation to take on challenges in a variety of careers (global business and new business creation, for example)
Dual work challenges	In addition to their original work, participants take on another type of work (specific project work, etc.) during some of their working hours

Personnel appraisal system

We have put in place a mechanism to carefully assess each employee's "abilities" and "level of contribution" to our company's performance and reflect those in their salaries, etc., so our employees will have more willingness to grow and feel even more motivated and rewarded.

Furthermore, we grasp (discover) each individual employee's abilities and qualities through a series of processes that comprise of training, reassignment and appraisal, so that all the employees can perform at their full potential in various fields.



Relevant data

		2018/3	2019/3	2020/3
Number of trainees (in total)	non-consolidated	40,893	36,551	35,522
Hours spent in learning per employee	non-consolidated	_	_	36.3 hours
Total training costs	non-consolidated	1,705 (million yen)	1,598 (million yen)	1,738 (million yen)
Training cost per employee	non-consolidated	_	_	86,300 yen

Kansai Transmission and Distribution. Inc

Responsibilities Toward Customers

Securing a stable supply of energy

Policy and Concept

Energy risks faced by Japan

Japan's energy self-sufficiency rate is around 12%, including nuclear power generation, which is a very low value compared to major countries in the world. For most of its fossil fuel needs, Japan must rely on imports. Since energy resources on the earth are not inexhaustible, stably securing energy resources is a top-priority issue for Japan. For continued stable supply of energy in the future, it is vital to combine various power generation methods in a well-balanced manner, while not relying on only a single power generation method.

Energy self-sufficiency rates of major countries (for 2017, except FY2018 for Japan)



Facility configuration based on S+3E

In light of this background situation, in order to fulfill our mission of delivering high-quality and economical electricity to our customers, we seek to realize S+3E whereby Safety (S) is our top priority whilst seeking to simultaneously achieve Energy security, Economy and Environmental conservation (3E). As a leading decarbonization company, we will accelerate our efforts focused on both nuclear power and renewable energy.

Energy mix

In July 2015, the government established a long-term energy supply and demand outlook (energy mix) that expresses how energy supply and demand should be in Japan for fiscal 2030. Furthermore, the 5th Strategic Energy Plan formulated in July 2018 unveiled the government's intention to further step up efforts to ensure the realization of this energy mix. As for the power supply composition, nuclear power is specified to have a fixed ratio of 20–22%, and 22–24% is indicated for renewable energy.

FY2030 energy mix



Reference: The Agency for Natural Resources and Energy, the Ministry of Economy, Trade and Industry "Energy of Japan 2019"





Sustainability for the Kansai Electric Power Group	Environment	Environment Social			Governance
	Kansai Electric Power C	iroup	Kansai Electric Power Co., Ir	ic.	(Kansai Transmission and Distribution, Inc.

• • • Goals • • •

As a leading decarbonization company we are committed to ensuring the safe and stable operation of our nuclear power plants, restarting reactors in sequence and promoting the nuclear fuel cycle. In addition, we are focusing on the further development and exploitation of renewable energy sources, which when combined with thermal power generation, etc. will create a well-balanced power source mix.

Efforts **

Approach for stable fuel procurement

We place a premium on safe, cost-effective and flexible procurement of thermal power generation fuel while diversifying procurement sources, offering flexible pricing options and seeking alliance opportunities with other companies. As part of these efforts, we aim to expand our business operations, focusing on upstream (stake acquisition) and middle-steam (transportation) operations in the LNG value chain. Fossil fuel faces a variety of problems, such as concentration in certain regions and political instability in the producing countries.

In order to procure fossil fuels stably, economically and flexibly, our Company is involved in every stage from fuel production to receiving. We also work to diversify procurement sources and pricing formula.

Our fuel procurement in fiscal 2019



• Enhanced spot trading for agile LNG procurement and sales

In an effort to deal with demand fluctuations, KE Fuel Trading Singapore Pte. Ltd., which was established in April 2017 to secure the procurement of LNG and expand our sales network, plays a pivotal role in extending our information gathering network based in Singapore, which is the LNG trading hub in the Pacific region. The role of KE Fuel Trading Singapore includes timely gathering of information such as spot LNG trading and establishment of flexible LNG procurement/sales systems.



• Developing a full-scale nuclear fuel cycle

Uranium, a fuel for nuclear power generation, is produced in politically stable nations, which enables a stable supply. It can also be a "semi-domestic energy resource" mainly because a small amount of uranium is required for long-term power generation and spent fuel can be reprocessed and used again as fuel. Promotion of the "nuclear fuel cycle," a cycle of re-using uranium and plutonium out of fuels used at nuclear power plants, is a practical way to effectively use energy resources and secure stable energy for Japan, a resource-poor country.



MOX (mixed oxide) fuel: Plutonium mixed with depleted uranium Source: "Nuclear Power and Energy Drawings" (Japan Atomic Energy Relations Organization)

Recyclable Fuel Storage Center

Spent fuels are stored in a spent fuel pool inside power stations for a certain period of time and then transported to a reprocessing plant. In case the pool is filled to capacity, the power station cannot be operated. For this reason, spent fuels have to be taken out in a planned manner. Installation of a recyclable fuel storage center (interim storage facility), in which spent fuels are temporarily stored, enables the stable operation of power plants into the future. Our Company prepared a "Plan to promote measures for spent fuel" in 2015, and we are working as a unified company on efforts toward obtaining sites and promoting understanding about the necessity and safety of it widely among the public in power consuming areas.



Sustainability for the Kansai Electric Power Group	Environment	Social	Governance

Kansai Electric Power Co., Inc.

Initiatives prioritizing safety at nuclear power plants

To prevent the lessons of the Mihama Nuclear Power Station Unit 3 accident from fading away

Policy and Concept

On August 9, 2004, an accident involving the rupture of secondary system piping occurred at Mihama Nuclear Power Station Unit 3. Based on the President's Declaration "Ensuring safety is my mission, and the mission of the Company," we have strictly implemented recurrence-prevention measures, with a firm determination that we shall never cause such accidents. The Nuclear Power Division has established Five Basic Principles as preventive measures that form part of our quality policy concerning the operation of nuclear power businesses with safety as the top priority. These measures are revised as necessary for safety improvement purposes. Making every August 9th our "Safety Vow Day," every employee observes a moment of silence. We are working to cultivate a safety culture in order to implement business management with safety as the top priority and prevent the lessons of the Mihama Nuclear Power Station Unit 3 accident from fading.

Quality policy concerning the operation of nuclear power businesses with safety as the top priority

- 1. We will prioritize safety above all.
- 2. We will positively invest resources for safety purposes.
- 3. We will fully recognize the characteristics of nuclear power and continue our effort in reducing risks.
- 4. We will put our endeavor to recover the trust of plant-hosting communities and the whole country by further pushing ahead with the communication with them.
- 5. We will objectively assess our effort toward safety.

System **



Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Power G	roup Kansai Electric Power Co. J	nc Kansai Transmission and Distribution. Inc.

• • • Goals • • •

Give top priority to safety in business operations, based on lessons learned from the accident at Mihama Nuclear Power Station Unit 3.

Efforts

"Safety Vow Day"

- A stone memorial was erected in the premises of the Mihama Nuclear Power Station with a pledge not to repeat similar accidents.
- All employees shall commemorate the victims of the accident with a moment of silence every year on August 9 at 15:22 (the time of the accident) with each individual renewing his/her determination to give top priority to safety.
- The President and others renew vows of safety and observe a moment of silence before the stone memorial every year.
- All employees review their CSR Conduct Cards on which they have written their own safe conduct oaths.



Communication between management and front-line workers

All offices are visited by the president while executives (including those of other divisions) engage in face-to-face discussions with power station staff. It is an opportunity for front-line workers to communicate their opinions to management.

Improved communication with manufacturers and subcontractors

Continuous improvements are made through interactive communication to ensure the safe operation of nuclear power plants as well as strengthening the cooperative relationships we have with manufacturers and subcontractors. Opinions collected through questionnaires contribute to developing our safety culture, identifying unsafe operational practices in nuclear power plants and improving the work environment.



Door-to-door visits with local residents

Our employees, including the Director of the Nuclear Power Division, visit each household in communities where our power plants are located (towns of Mihama, Ohi and Takahama in Fukui Prefecture) to engage in mutual dialogue.

In-house training

• Tailor-made training courses are provided to all employees, from new recruits to newly-appointed managers, to brief them on the accident at Mihama Nuclear Power Station Unit 3 and help them learn lessons from it.

Kansai Transmission and Distribution, Inc.

Commitment to Enhancing Nuclear Safety

Policy and Concept + *

In response to the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Station, we established our Commitment to Enhancing Nuclear Safety, which clearly states our ideals about nuclear power safety, as a company proclamation that is one of our most important company rules. The company proclamation underlines our determination to constantly improve safety in nuclear power generation, whereby all executives and employees fully understand the characteristics and risks of nuclear power generation and always remind themselves of the potential magnitude of an accident, with the President playing a leading role in making company-wide efforts to protect local communities, society and environment.

Composition and summary>

Preface	Every one of us shall remember the lessons learned from the Fukushima-Daiichi nuclear accident and ceaselessly strive to enhance nuclear safety to protect the people not only in the plant-hosting communities but also the whole country, and to preserve the environment.
Characteristics of nuclear power generation and risk awareness	Nuclear power generation has superior characteristics in terms of energy security, prevention of global warming and economic efficiency, and is an essential power source for the future. On the other hand, nuclear power generation has risks of radiation exposure and environmental contamination. Every one of us shall always bear in mind that once a severe accident happens due to lack of proper management, it could cause enormous damage to the people and the environment.
Continuous removal/ reduction of risk	To enhance nuclear safety, we shall fully understand the characteristics and risks of nuclear power generation and continually remove or reduce such risks while identifying and evaluating them, never believing at any moment that we have reached the goal of ensuring safety. These efforts shall be conducted at each level of the Defense-in-Depth.
Development of safety culture	Safety culture is the basis for continuously removing or reducing risks. Since the accident of Mihama Unit No. 3, we have been reviewing and improving our safety culture, and we shall develop such safety culture. To this end, we shall always be ready to question anything, learn from others and listen to the voices of society and discuss issues uninhibitedly while respecting diverse opinions with further efforts.
Commitment to enhancing nuclear safety	Enhancing nuclear safety is the overriding priority in the company. It is also important to promote two-way communications with the people in the plant-hosting communities and the whole country, and to share common perceptions on nuclear safety. Under the President's leadership, every one of us shall work together to tirelessly enhance nuclear safety.

• • • Goals • • •

Every one of us shall remember the lessons learned from the Fukushima Daiichi nuclear accident and ceaselessly strive to enhance nuclear safety to protect the people not only in the plant-hosting communities but also the whole country, and to preserve the environment.

Efforts **

In-house training

- A series of e-learning training courses are in place to help all employees understand our Commitment to Enhancing Nuclear Safety.
- Each department voluntarily holds group discussions while managers communicate safety messages to raise safety awareness among employees.

Sustainability for the Kansai Electric Power Group	Environment		Social	Governance
	Kansai Electric Power	Group	Kansai Electric Power Co., Inc	(Kansai Transmission and Distribution, Inc.)

Safe and stable operation of power plants

Policy and Concept

Take all possible measures to safely and carefully operate and maintain nuclear power plants, underlining our determination to constantly improve their safety.

System **



• • • Goals • • •

We will continue to safely and carefully operate and maintain our nuclear power plants, thereby ensuring the safe and stable operation of Units 3 and 4 of the Takahama Nuclear Power Station and the Ohi Nuclear Power Station, each of which has resumed operations.

Efforts + +

Key safety measures

Careful inspection and examination

In an effort to ensure the safe and stable operation of our nuclear power plants, facilities and instrumentation are regularly inspected and shut down in accordance with the relevant laws and regulations, all of which is intended to protect shop-floor employees and maintenance personnel.

 Data on regular inspection results and facility conditions is reviewed to determine the content and frequency of inspections according to the characteristics of each facility. This approach serves as the basis of our inspection and maintenance protocol.

Education and training of plant employees (operators, maintenance personnel, etc.)

Improving the technical skills of shop-floor employees (operators, maintenance personnel, etc.) is key to the safe and stable operation of nuclear power plants. In-house and external training is conducted on a regular basis.

- OJT is conducted through routine practice.
- Operators regularly simulate normal operating procedures and practice troubleshooting.
- Maintenance personnel are trained on inspection work at the Nuclear Power Training Center, using the same instrumentation one would find at a power plant.

Five-layered wall structure to contain radioactive substances

Uranium nuclear fission at nuclear power plants produces radioactive substances, which are contained in a building with a five-layered wall structure (pellets, cladding tubes, pressure vessels, containment vessels and external shielding walls).

In-depth defense system

Nuclear power plants are designed to prevent malfunctions and operational errors when, in the event of failure, reactors are immediately shut down, followed by the cooling and containment of radioactive substances.

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance

Kansai Electric Power Group

Kansai Transmission and Distribution, Inc.

Reactor cooling system

Following a shutdown, residual heat removal pumps are activated to operate coolers, which cool the primary system water. In the event of a complete power loss, auxiliary feed pumps powered by steam-driven turbines feed water to steam generators, which cool the primary system water.

Safety measures to deal with various risks

Toward improved safety and confidence

Learning lessons from the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Station, the new regulatory requirements provide measures against earthquakes and tsunamis, with design standards revised to prevent similar accidents; taking into account the risks of natural disasters in Japan, these standards cover various other risks such as volcanic eruptions, tornadoes and forest fires. Complying with these new regulatory requirements, we are renovating our licensed power plants to protect them against severe accidents, earthquakes, tsunamis, tornadoes and fires. At the same time, voluntary efforts are underway to improve plant safety.

Improving technical capabilities and systems in the event of a severe accident

Conducting nuclear power disaster response training in collaboration with central and local government

Disaster response training programs are underway at our nuclear power plants, the Nuclear Power Division and the head office, some of which are conducted in collaboration with central and local government, manufacturers and subcontractors. Specifically, comprehensive training programs are conducted without prior notice to participants, simulating severe conditions, where emergency response capabilities are tested for improvement purposes. This includes the feasibility of post-accident remedial measures using water trucks and alternative portable low-pressure water pumps - which is already part of routine drill exercises at each of our power plants - and the examination of the communication systems in place for each task force.

Education and training tailor-made for each role and responsibility

Supervisors and operators undergo repeated education and training according to their roles and responsibilities, in how to respond to a severe accident. This is to improve their emergency response capabilities and technical skills. Contents and target employees of this education and training were made more diversified than those at the time right after the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Station. In fact, the total number of trainees training on plant behavior during a severe accident has increased significantly, as has the frequency of training on emergency response procedures.

Creating a response system

Improving the out-of-hours response system

Emergency personnel stand by around the clock at Units 3 and 4 of the Takahama Nuclear Power Station and the Ohi Nuclear Power Station, taking into account findings learned from the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Station. They are in charge of the initial response to an incident, where resources are mobilized within six hours after an accident has been declared.

Improving the Nuclear Emergency Assistance Center

The Nuclear Emergency Assistance Center (at Mihama, Fukui Prefecture) was jointly established by nuclear operators and went into full-scale operation in December 2016. Here remote-controlled equipment and instruments have been upgraded for flexible, advanced disaster response while emergency personnel of respective nuclear operators are trained. In the event of an emergency, equipment and instruments can be transported to a disaster site, with remote-controlled assistance provided to jointly minimize radiation exposure of shop-floor employees.

Cooperation between nuclear operators

Nuclear operators are expanding their cooperative relationship to further improve the safety and reliability of their operations. • Mutual cooperation agreement between five electric power companies in western Japan

- Our Company, the Chugoku Electric Power, Shikoku Electric Power and Kyushu Electric Power entered into a cooperative agreement on nuclear power generation on April 22, 2016, and they were joined in the agreement by Hokuriku Electric Power on August 5, 2016. This agreement is designed to improve preparedness and emergency responses to nuclear power disasters by providing mutual assistance, equipment, instruments, etc., as well as taking advantage of their geographical proximity. There is also agreement to cooperate in conducting decommissioning in a safe, well-organized manner and setting up special facilities to deal with designated severe accidents, all intended to further improve the safety and reliability of nuclear power generation.
- Technical cooperation agreement between four electric power companies with pressurized water reactors (PWRs) Four electric power companies operating nuclear power plants equipped with similar PWRs (Hokkaido Electric Power, Kansai Electric Power, Shikoku Electric Power and Kyushu Electric Power) entered into a technical cooperation agreement on October 19, 2016. With this agreement in place, the four companies, each of which operates PWRs, exchange their technical knowledge and experience, where they share information on power plant operation management in other countries and examine new technologies to further improve reactor safety.

Sustainability for the Kansai Electric Power Group	Environment		Social	Governance
	Kansai Electric Power	Group	Kansai Electric Power Co., Inc.	Kansai Transmission and Distribution, Inc.

Supporting municipal evacuation plans

Efforts toward nuclear emergency preparedness

While a variety of safety measures are in place at our nuclear power plants, we cooperate with central and local government in minimizing impacts on local residents in the event of a nuclear disaster involving the massive release of radioactive substances. These activities are in line with relevant laws including the Disaster Countermeasures Basic Act and the Act on Special Measures Concerning Nuclear Emergency Preparedness. Nuclear operators are and will be making full efforts to ensure nuclear safety and prevent disasters in cooperation with central and local government.

Communication in the event of a nuclear disaster

In the event of a nuclear disaster, we as nuclear power plant operators shall immediately report to the relevant authorities at all levels; all the parties concerned shall get together at the Offsite Center to share information and determine protective measures for local residents as the situation demands, while the nuclear disaster task force of each municipality communicates the center's decisions to local residents.

Supporting nuclear disaster victims

• Providing transportation for evacuation

We shall mobilize all resources available to help local residents evacuate; this includes the provision of evacuation supervisors and transportation such as employee shuttle buses, welfare vehicles and contracted helicopters and vessels.

 \bullet Assisting and managing testing during an evacuation

At the request of municipalities, we shall assist and manage testing at the time of evacuation, targeting all those evacuated from the Urgent Protective action planning Zone or UPZ. Inspectors shall be provided along with equipment such as contamination survey meters and Tyvek suits.

Providing necessities

We provide necessities such as food and blankets as well as radiation protection facilities.

Preparing for operation beyond 40 years

Policy and Concept

Nuclear power – a well-balanced energy source contributing to 3E (Energy security, Economy and Energy conservation) – is essential in resource-poor Japan. As a result, nuclear power generation should be maintained at a certain level to ensure energy security and develop technical/human resources, whereby accident-proof nuclear power plants can be operated for over 40 year-spans. Therefore, we will be making the most of our nuclear power plants, placing a premium on their safe operation.

• • • Goals • • •

With responsible construction management in place and safety prioritized, we are committed to improving the safety of our nuclear power plants while thoroughly reviewing our current construction plans. At the same time, we aim to communicate the importance and safety of operating nuclear power plants for over 40 years to local communities and residents.

Efforts + +

• Promoting safety improvement measures toward the restarting of operations at Takahama Nuclear Power Station Units 1 and 2 and Mihama Nuclear Power Station Unit 3, as well as activities to gain understanding of operations beyond 40 years

Our Company has always maintained the durability of our nuclear power plant facilities by continuously implementing maintenance and management, including regular inspections and planned equipment replacements. At the time of our application for an operation period extension for 40 years from the starting month of operation, in accordance with the law, for Takahama Nuclear Power Station Units 1 and 2 and Mihama Nuclear Power Station Unit 3, special inspections were carried out for reactor vessels and other equipment. In addition, technical evaluations of degradation from age were carried out, confirming that the durability of important facilities for safety could be assured even for an operation period of 60 years. After these examinations, we received operation period extension approvals from the Nuclear Regulation Authority for both power stations. As we now prepare for operations beyond 40 years, we are steadily advancing large-scale safety measure construction projects.

We are undertaking face-to-face communication, including power plants tours by the Nuclear Power Division and explanations in various locations to deepen public understanding about the operation of our plants beyond 40 years. We will continue to promote active communication with people in the communities including those who live near our facilities.



Takahama Nuclear Power Station Units 1 and 2 containment vessel upper shield installation work



VR-based plant tour provided at a shopping mall

(Kansai Transmission and Distribution, Inc.

Reliable decommissioning processes

Policy and Concept

- We comply with the relevant laws and regulations on decommissioning, while giving top priority to safety in order to minimize exposure, reduce radioactive waste and properly manage security measures.
- We have designed safe decommissioning procedures and processes, incorporating effective decontamination techniques, remote-controlled equipment and measures to prevent the spread of contamination all intended to minimize the exposure of those engaged in radiation-related work, strictly complying with statutory dose limits. In addition, a safe storage period is set for zones with relatively high radiation levels, taking into account the attenuation of radioactivity.
- We will continue to work on a series of measures for safe decommissioning, environmental conservation and regional development, according to the Agreement on Nuclear Power Plant Decommissioning, which was signed with Fukui Prefecture, Mihama Town and Ohi Town.

Goals **

Securing human and environmental safety

With safety prioritized, we will focus on minimizing exposure and radioactive waste as well as properly managing security measures.

Designing safe decommissioning procedures and processes

We will design safe decommissioning procedures and processes, incorporating effective decontamination techniques, remote-controlled equipment and measures to prevent the spread of contamination, as well as operating waste disposal facilities to minimize the exposure of neighborhood residents and those engaged in radiation-related work.

Foolproof system

The Decommissioning Technology Center (which was established in June 2015 within the Nuclear Power Division) cooperates with subcontractors in decommissioning nuclear power plants in a safe and foolproof manner.

• Decommissioning according to the Agreement on Nuclear Power Plant Decommissioning

We will continue to work on a series of measures for safe decommissioning, environmental conservation and regional development.

Efforts **

Radioactive waste treatment and disposal

Solid radioactive waste treatment

Non-radioactive general waste accounts for about 97% of decommissioning waste while radioactive waste is disposed of at designated facilities prior to completion of decommissioning in accordance with its radioactive level. Meanwhile, waste that does not need to be treated as radioactive waste (clearance) is recycled as much as possible, following approval by the government.

Treatment of gaseous and liquid radioactive waste

Gaseous and liquid radioactive waste is properly treated and released into the environment as is the case during regular plant operations, with strict monitoring in place.

Decommissioning with safety prioritized

Decommissioning is conducted in four stages, which all together takes a total of about 30 years. While Stage 1 (dismantling) is underway, proper measures are in place for safe decommissioning.

Decommissioning underway at Mihama Nuclear Power Station Units 1 and 2

O Radioactivity investigations

The surface doses of equipment and piping are measured while concrete/metal materials are sampled and analyzed by third parties for radioactive contamination to accurately assess residual radiation levels in the facilities and monitor possible contamination.

O Dismantling of equipment, etc. in the turbine buildings

Dismantling of contamination-free equipment, etc. is underway at the turbine buildings (items that may serve as obstacles to the dismantling process such as piping, frames and other small equipment) in addition to large equipment such as turbines, condensers and deaerators.

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ustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Power	Group Kansai Electric Power Co.,	Inc. Kansai Transmission and Distribution, Inc.

Kansai Electric Power Group

Decommissioning underway at Ohi Nuclear Power Station Units 1 and 2

O System decontamination

Chemicals will be used to remove radioactive substances attached to the inner surfaces of equipment and piping - a process is underway to minimize the exposure of workers and facilitate dismantling.

O Dismantling of equipment, etc. in the turbine buildings

Dismantling of contamination-free equipment, etc. is underway at the turbine buildings (items that may serve as obstacles to the dismantling process such as piping, frames and other small equipment) in addition to large equipment such as turbines and moisture separator heaters.

Activities as a pioneer of decommissioning

Japan's first decontamination of a pressurized water reactor (PWR) system

The system decontamination procedure underway at Mihama Nuclear Power Station Units 1 and 2 is unprecedented, involving the decommissioning of pressurized water reactors (PWRs), which requires advanced and special techniques. Therefore, any and all literature on system decontamination and plant manufacturer expertise were extensively surveyed from sources both home and overseas from the perspectives of "foolproof decontamination" and "reduction of waste produced by decontamination." This has led to cooperation with overseas manufacturers with proven track records in decontamination and with domestic manufacturers producing the same equipment as those used in Mihama Nuclear Power Station Units 1 and 2 (and hence well-versed in all aspects of the station). As a result, as originally planned more than 90% of the radiation has been removed, with safety prioritized.

Learning from the world

The work at Mihama Nuclear Power Station Units 1 and 2 is expected to pioneer the decommissioning of pressurized water reactors (PWRs) while research on decommissioning is underway in partnership with universities and the Wakasa Wan Energy Research Center.

In addition, information sharing agreements are in place with nuclear operators in US, France, Spain and South Korea, etc. on many aspects of nuclear power generation (including decommissioning) to learn from safety improvement measures in these countries.

Cooperation with nuclear operators in Japan

We signed an agreement with Hokuriku Electric Power, Chugoku Electric Power, Shikoku Electric Power and Kyushu Electric Power on cooperation across nuclear power businesses to facilitate safe decommissioning including reviewing techniques and procurement for large-scale decommissioning, information sharing on decommissioning processes, etc.

Review of techniques and procurement for large-scale decommissioning

Measures such as joint material procurement are underway for safety and efficiency improvement purposes, according to the schedule of large-scale decommissioning projects at each power company including the inspection of the reactor interior, etc.

Information sharing on decommissioning processes

The status of decommissioning projects at each power company is mutually monitored to facilitate safe decommissioning while information on expertise, best practices and concerns in other countries are shared.

Local business development and employment promotion

According to the Agreement on Nuclear Power Plant Decommissioning (which was signed with Fukui Prefecture and Mihama Town on February 10, 2016, and with Ohi Town on November 22, 2018), the timing and procedures for decommissioning are being planned and announced, based on coordination with local businesses and employment promotion policies related to the decommissioning work.

Information sharing for each decommissioning process

In cooperation with the Wakasa Wan Energy Research Center, contractors and subcontractors share information on decommissioning processes to encourage the participation of local businesses according to their technical capabilities. O Information sharing, implemented three times for Mihama Nuclear Power Station Units 1 and 2 (on March 2017, January 2018 and January 2019)

O Information sharing, implemented once for Ohi Nuclear Power Station Units 1 and 2 (on March 2020)

Research with local businesses

Research on decommissioning is underway with local businesses and other stakeholders to address and solve technical challenges, thereby streamlining decommissioning processes and improving their reliability. At the same time, assistance is provided to local businesses committed to developing new techniques to aid with decommissioning.

O Four techniques were adopted in fiscal 2016, two in fiscal 2017, one in fiscal 2018 and two in fiscal 2019.

Human resource development for decommissioning

Guidance on decommissioning, lectures on relevant techniques, study tours and first-hand experience programs are provided in cooperation with the Wakasa Wan Energy Research Center.

O Conducted 10 times in total between fiscal 2016 and 2019.

stainability for the Kansai Electric Power Group	Environment	Social	Governance

Voluntary efforts to enhance nuclear safety

Policy and Concept

Learning lessons from the accident at Mihama Nuclear Power Plant Unit 3, we place a premium on nuclear safety. Specifically, the accident at Tokyo Electric Power's Fukushima Daiichi Nuclear Power Station made us aware that our understanding and preparedness for risks unique to nuclear power generation were not necessarily sufficient. We, therefore, established a roadmap to "step-up voluntary/continuous efforts to improve nuclear safety," based on which various measures are being implemented.

• • • Goals • • •

Efforts are underway to realize a nuclear safety ideal, which translates into development and implementation of a framework for voluntary/continuous safety improvement measures as well as incorporating external knowledge for further improvement, in accordance with our "Commitment to Enhancing Nuclear Safety."

Efforts + +

• Communication and standardization of a philosophy, giving top priority to safety

Sharing a philosophy of giving top priority to safety

- O Management takes the lead in communicating our philosophy of giving top priority to safety.
- Members in management visit frontline workplaces in the power plants, etc. to communicate with plant employees and subcontractors, stressing the importance of improving safety.

O A company-wide proclamation: "Commitment to Enhancing Nuclear Safety*" has been adjusted, communicated and standardized at workplaces.

- Group discussions and workshops are held, involving case studies relating to the proclamation.
- Communication tools such as an illustrated version are in place.
- * Refer to page 43.

Creating a platform for safety improvement

Human resource development

O Human resources for nuclear safety are being developed based on the human resource development plan.

- < To ensure smooth technical transfer>
- OJT* programs for instructors are in place to help experts better transfer their techniques and knowledge.
- Video (animation) tools are available to better understand the structures and behaviors of facilities that cannot be seen from the outside.
- < Education and training to raise awareness of hazards >
- Training programs are in place, focusing on troubleshooting procedures.
- * On the Job Training: Education and training provided at workplaces

Safety improvement activities

Promoting safety improvement measures

O Large-scale renovation work is underway at Mihama Nuclear Power Station Unit 3 and Takahama Nuclear Power Station Units 1 and 2 to deliver over 40 years of safe operation.

- Large equipment, pumps and piping are being replaced while central control panels are being upgraded to their digital counterparts to enable timely and accurate monitoring and operation.
- Earthquake-proof steel-framed concrete gantries* were set up at Mihama Nuclear Power Station Unit 3, preparing for a possible collapse of the hill nearby, which could damage the reactor building, access routes, etc.
- * Access platforms for reactor containment vessels, etc.

Boosting the accident response capacity

O Our accident response capacity is improving to deal with possible nuclear disasters.

• Comprehensive disaster drills are conducted at all nuclear power plants. With timely and accurate accident remedial measures in place to prevent the spread and expansion of damage following an accident, continuous improvements are made, based on achievements made in previous drills. (The below are examples provided by Takahama Nuclear Power Station)

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance

Kansai Electric Power Group

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

< Key features of the drill (1) >

- An "EAL judgment flow" was developed to judge Emergency Action Levels (EALs)*¹ in an accurate and timely manner.
- EALs are shown in a diagram to promote quick judgments during unusual events, thus enabling accurate and timely emergency classification.
- < Key features of the drill (2) >

Information sharing methods were improved for quick and smooth information sharing during disasters.

- Systems were updated to quickly share information on critical issues including plant conditions, etc.
- Electronic whistles were used to prevent panics, alert all employees and provide them with instructions when task forces have emergency issues^{*2} that need to be communicated.
- O Building leadership capacity to cope during an emergency is part of preparing for possible nuclear disasters.
- The TAIKAN training program^{*3} was conducted (at Takahama and Ohi) to improve communication skills and decision-making capacity under stressful conditions. These exercises are designed to train plant task force leaders so that they can take control in the event of emergency such as a severe accident.
- Five electric power companies^{*4} in west Japan cooperate in capacity building in the event of a nuclear disaster.
- The five companies jointly conducted a logistic support drill at the Chugoku Electric Power's Shimane Nuclear Power Station.
- Support staff were dispatched to cooperate with municipalities and conduct review inspections at the time of evacuation.
 Training programs and disaster drills including one organized by the national government with Tottori and Shimane Prefectures, along with drills organized at the prefectural government level by Ehime, Ishikawa and Kagoshima, with Saga,
- Fukuoka and Nagasaki Prefectures holding a joint drill. *1 Standards for three-stage emergency classifications (alert, site area emergency and general emergency) based on the conditions at a nuclear power facility
- *2 EAL judgment calls by the director, briefings (meetings, etc.), sudden changes to conditions at the plant (discontinuation of reactor core injection, etc.), evaluating
- the estimated time of core damage, etc. *3 Developed by the Institute of Nuclear Safety System, Incorporated (INSS).
- *4 Hokuriku Electric Power Company, our Company, the Chugoku Electric Power Co., Inc., Shikoku Electric Power Co., Inc., and Kyushu Electric Power Co., Inc.

• Developing and improving systems to manage risks, etc.

Continuously improving our risk management system

O Learning lessons from industrial accidents^{*1}, including the accident that took place at the Takahama Nuclear Power Station^{*2} in March 2020, our risk management system is being improved to prevent accidents and disasters.

- Risk review meetings are held as needed to discuss risks involved in decommissioning, etc. and to develop countermeasures.
- Risk factors are identified and basic actions are strictly observed to prevent industrial accidents.
- < Review of industrial accident prevention measures >
- Despite our efforts to step up prevention measures in the wake of industrial accidents that took place in September and October 2019, a fatal accident occurred in March 2020 at the Takahama Nuclear Power Station.
- As part of our efforts to take this accident seriously, previous accidents were reviewed to seek out trends that can bolster prevention measures.

Review results: Accidents abound in civil engineering and construction work, and there have been several incidents at the Takahama Nuclear Power Station, where a lot of construction work is currently underway.

- ⇒ Qualified safety advisors (workplace safety consultants) inspected construction sites, focusing on civil engineering and construction work. At the same time, the Takahama Nuclear Power Station was staffed with additional advisors to bolster prevention measures, in accordance with the volume of civil engineering and construction work on site.
- The entire process was reviewed to facilitate staff allocations and work scheduling through communication with subcontractors, whose opinions were taken into account, given possible changes to the work on site.
- O Prevention measures for novel coronavirus are in place to secure the safety of our power plants.
- All employees are checked for body temperature before starting work and entering the power plant (as a form of quarantine control), using thermographic imaging, etc.
- More shuttle buses are provided exclusively for generator room staff so that those working at different workplaces use different buses.
- Access to the central control rooms is controlled while partitions have been installed to avoid face-to-face contact.
- *1 Severe industrial accidents took place during the earthquake-proof construction and reinforcement work on the spent fuel pits at Mihama Nuclear Power Station Unit 3 (September 2019), the safety construction work at Takahama Nuclear Power Station Units 1 and 2 (September 2019) and the tunnel construction work at Ohi Nuclear Power Station Units 3 and 4 (October 2019) – including a serious injury caused by falling steel materials (October 2018) at Takahama Nuclear Power Station Unit 1, a crane collapsing at Takahama Nuclear Power Station Unit 2 (January 2017), water leakage in the controlled area at Takahama Nuclear Power Station Unit 4, and an automatic reactor shutdown following automatic generator shutdown, also at Takahama Nuclear Power Station Unit 4 (February 2016).
- *2 A subcontracted worker died in an accident during safety construction work at Takahama Nuclear Power Station Units 1 and 2 (March 13, 2020).

Developing and improving tools for risk management and assessment

O Improvements were made at the Takahama Nuclear Power Station Unit 3 to further reduce risks of reactor core damage during regular inspections.

- During a regular inspection of Takahama Nuclear Power Station Unit 3, more water was retained and the time required for the midloop operation^{*1} was significantly reduced (from about 24 hours to about three hours). The midloop operation is performed right after reactor shutdown, with the core filled with fuel rods.
- This provides sufficient time for operations during an accidental loss of core cooling functions, which further reduces the risks of core damage.

ainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Power G	roup Kansai Electric Power Co., In	nc. (Kansai Transmission and Distribution, Inc.)

O Ohi Nuclear Power Station Unit 4 and Takahama Nuclear Power Station Unit 4 were evaluated for safety improvements^{*2}, which resulted in advanced safety improvement measures.

- Probabilistic risk assessments (PRA*³) and safety margin evaluations (stress testing) were conducted, in accordance with the latest conditions at the power plants to identify risks and take continuous measures to reduce or eliminate said risks. The evaluation results contribute to developing advanced safety improvement measures.
- *1 The reactor coolant system water level is maintained near the center of the loop piping, with the reactor vessel filled with fuel rods, wherein air is fed to the system to dissolve and remove radioactive substances attached to the inner surface of the piping, thereby reducing radiation exposure. While higher water levels block air flow, radioactive exposure in this particular case can be reduced by adding chemicals, a practice that has been in place at Takahama Nuclear Power Station Unit 3 since the 24th regular inspection.
- *2 It is designed to help operators evaluate nuclear safety and make voluntary efforts for continuous improvement.
- *3 A technique to quantitatively evaluate the probability that possible phenomena in nuclear power facilities develop into severe accidents such as core damage.

Incorporating objective evaluation and external knowledge

- O Safety measures at our nuclear power plants are monitored and evaluated for improvement purposes.
- Reviewers from other electric power companies, etc. provided technical and objective evaluations at the Mihama Nuclear Power Station in February 2020 (independent oversight).
- Evaluating power plants' conditions using performance indices (PI)* and conducting site inspections
- O Meetings are held with senior management of overseas electric power companies while information is shared between working-level staff to incorporate practices and knowledge from around the world.
- Representatives from the Golfech Nuclear Power Plant of EDF (France) visited the Ohi Nuclear Power Station as part of an exchange program, where information was shared on measures implemented at aging nuclear power plants.
- Our representatives visited the Robinson Nuclear Power Plant of Duke Energy (US) and surveyed on its site inspection system, etc.
- * An indicator for quantitative management of the performance of a power plant

Improving communication

Promote risk communication*

O As we take the opinions and concerns of the public seriously, some of which voice concern toward operating power plants over 40 years, we are engaging in mutual communication to jointly seek solutions.

- We visit each household in Mihama Town, Takahama Town and Ohi Town, where our nuclear power plants are located, to engage in mutual dialogue.
- Plant tours by the Nuclear Power Division and other programs are in place, where visitors are briefed on operations of our plants, exceeding 40 years.
- We get together with observers of our PR magazine, *Echizen Wakasa no Fureai* to solicit opinions and facilitate communication.
- O A training program is in place to help employees better communicate risks to the public.
- For staff in charge of plant tours by the Nuclear Power Division, workshops are held to help them better communicate risks to the public.
- * Risk communication: A mechanism whereby the risk aspects of nuclear power generation are shared and the public's opinions are incorporated into business management.

Relevant data

	2018/3	2019/3	2020/3
Number of participants in training and practice programs for nuclear power disasters	About 5,700	About 5,900	About 5,700
Number of nuclear power disaster drills	About 5,700	About 6,300	About 6,100

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Cyber security measures

Policy and Concept

Many global events are planned in the years ahead, such as the Tokyo Olympic Games, the Paralympic Games and Expo 2025 Osaka, Kansai. As an important infrastructure company operating an electric power business, we believe that the delivery of safe and stable power supply by ensuring cyber security is our social responsibility. To fulfill this responsibility, we are strengthening cyber security measures against the growing threat of cyber attacks on important infrastructure that support society, in accordance with the relevant laws, regulations and guidelines for cyber security management, along with internal regulations. Moreover, as cyber attack methods are evolving day by day as they become more complex and sophisticated, we strive to obtain cyber attack information from outside the company in addition to the latest security information, so we can prepare countermeasures in a timely manner.

System **

Director responsible: Toyokazu Misono [CISO (Representative Executive Officer, Vice President)] Deliberative body: Executive Meeting Management office: Cyber Security Administration Group, Office of IT Strategy (Information Security Management Office)

Major information security incidents "0"

Efforts

Our cyber security efforts have been focused mainly on Information Technology (IT) systems that are connected to external networks, such as the internet, with a focus on external disclosure systems and countermeasures against targeted email attacks. Now that these cyber attacks are spreading to all Operational Technology (OT) systems related to the provision of a stable power supply, we are also bolstering our efforts across OT systems.

Specifically, risk assessments are made for IT and OT systems, necessary technical measures are taken, and monitoring is carried out 24 hours a day, 365 days a year at dedicated IT and OT monitoring centers. In addition to an emergency response system established in preparation for incidents, we are continuing to provide drills for how to respond to cyber attacks as well as relevant training for employees. We are gathering information about cyber attacks that occur outside our Company and the latest security information through, for example, the activities of the Japan Electricity Information Sharing and Analysis Center (JE-ISAC*), which is an organization that undertakes the sharing and analysis of cyber attack information among electric power businesses. Moreover, countermeasures are reviewed as needed. * An organization where business operators share and analyze information from the perspective of cyber security in order to ensure the stability of the supply of electricity in Japan.



Company-wide training to respond to cyber attacks

Established

Relevant data

Policy

Cyber Security Guidelines

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Sustainability	for the Kansai E	lectric Power Group
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Kansai Electric Power Co., Inc.

(Kansai Transmission and Distribution, Inc.

Providing services as a consolidated group

Policy and Concept

Aiming to be "the best partner in daily life and in business"

Our Group has been meeting the various demands of our customers and society by offering total solutions that combine our services, including comprehensive energy supply which is mainly offering electricity, as well as telecommunications, daily life and businesses.

Business areas for strong growth



Along with the global trend of electrification, the demands of our customers and society are becoming increasingly diverse. In order for the services offered by the Group to continue to be selected by customers, we will continue expanding the scope of our services in addition to our existing push toward "total electric conversion" and our provision of electricity and gas as a combination. From the standpoint of our customers, we will offer a wide variety of "safe, comfortable and convenient" as well as economical energy services. The Group has cultivated engineering as our core strength, and by leveraging this core strength we have committed to providing solutions that solve our customers' problems in all aspects of lifestyle and business. By providing these solutions we will play a role that exceeds our customers' expectations.

**** Goals * ***

Customer satisfaction survey: Satisfaction index 90% or higher \rightarrow 2019 result: 92.0%

Efforts **

Services for residential customers

In addition to "total electric conversion" that realizes a comfortable and convenient lifestyle, since February 2018 we have offered a new plan that combines our electricity and gas services.

We also offer services that are helpful for our customers' daily lives, including a service to dispatch support personnel to customers experiencing problems, such as a sudden power outage, as well as a points program through which points are earned according to the amount of energy usage.

As a comprehensive energy company, we will promote initiatives that satisfy our customers.

Service improvement and service creation to reflect the opinions of customers

We work to create and improve services in response to requests received from customers through our contact centers, website, etc. so we can meet our customers' needs.

> Number of improved cases based on customer feedback (2019. 4 – 2020. 3 results) **129**



Environment

Kanana Flantwin Dannar C

Customer satisfaction survey

We conduct "Customer Satisfaction Surveys" asking our customers to assess how understandable our telephone operators' explanations regarding inquiries such as "The lights in the house went out suddenly." We receive high evaluations from a lot of customers.

We will keep working to make our customers more satisfied by utilizing the evaluation results for improvements in services and businesses.

Lifestyle services with the confidence of our customers as the foundation





Aiming to make our Group the one that our customers trust and choose as the "best partner for their lifestyles," our individual companies deliver safe, comfortable and convenient lifestyle-related services to residential customers – services that are closely related to people's lives, such as home security, health management support and nursing care, based on our quality first policy.

We will employ the comprehensive abilities of our Group and combine them to develop and provide new service models that meet our customers' needs, thereby pursuing customer-focused, high-quality value-added services.

Services for corporate customers

Our Group promotes a variety of services, providing optimal energy systems and management methods designed to meet individual customer needs and help reduce energy consumption, costs, and CO₂ emissions.

Examples of adopting utility services

Kintetsu Real Estate Co., Ltd. adopted the utility services of Kanden Energy Solution Co., Inc. (Kenes) for the Abeno Harukas super-high rise multifunction building, which stands 300 m above ground and had its grand opening in March 2014. Expert energy technicians from Kenes are stationed at the building around-the-clock, managing facilities with different energy quality demands, including a department store, offices, a hotel and a museum. Moreover, we are continuously realizing energy, cost and CO₂ reductions by monitoring energy use conditions in real time and utilizing the collected data in operation and maintenance. In this way, we have been told that customers are able to focus their business resources, including essential personnel, on their primary businesses by entrusting work related to energy management to Kenes.



Inspecting the utility facilities of the Abeno Harukas building

Examples of services for corporate customers

Examples of services for corporate customers			
Enudge 2.0 (Kansai Electric Power Co., Inc.)	Next-generation energy platform. In addition to encouraging energy-saving behaviors, this service provides integrated solutions for operational improvement and renovation of store equipment and operational support for individual stores.		
Solar power generation on-site service (Kansai Electric Power Co., Inc.)	A service in which dispersed power generation equipment such as solar power generation equipment and storage batteries are installed on the customer's premises at our expense for long-term operational use. Customers can reduce their environmental burden by using energy from the equipment we operate.		
Industrial furnace optimal operation service (Kansai Electric Power Co., Inc.)	A service that remotely monitors the operation and energy usage status of an industrial furnace with sensors and measuring instrument installed inside the furnace, enabling data collection and management via the cloud. By combining this service with our periodical data analysis, we aim to realize "preventive maintenance," "reduction in gas consumption," and "technology transfer" in the realm of industrial furnaces.		
Utility service (Kanden Energy Solution Co., Inc.)	A service that enables customers to outsource facility management and even makes initial financing unnecessary for them by providing comprehensive services from fund-raising and design to installation and maintenance administration for utility facilities related to energy, including power receiving equipment, air-conditioning and heating equipment and boilers.		
Assistive vehicle leasing service (The Kanden L & A Co., Ltd.)	We provide total support for assistive vehicles, including leasing, sales, repair and upgrading.		
Business place security (KANDEN Security of Society, Inc.)	A service that preserves customer safety 24 hours a day 365 days a year by rapidly detecting abnormalities, including intruders and fires, and rushing staff to the site.		
Comprehensive building management (Kanden Facilities Co., Ltd.)	A service that provides safe and secure facility environments and contributes to increasing property values through, for example, the daily maintenance management and cleaning of buildings and facilities, security, environmental hygiene and energy management		

The Group companies that provide the services are indicated inside parentheses.

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Power G	Kansai Electric Power Co., In	nc. (Kansai Transmission and Distribution, Inc.)
 Relevant data 			

	2018/3	2019/3	2020/3
Number of reform cases based on customer feedback (cumulative)	101	225	129
Customer satisfaction (telephone consultation)	_	90.2%	92.0%
Number of Hapi e-Miruden [*] subscribers	3,988,000	4,830,000	5,522,000

* A web-based service that provides notifications related to electricity and gas charges and usage

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric Power	Group Kansai Electric Power Co., I	nc. Kansai Transmission and Distribution, Inc.
To provide high-qua	lity electric pow	er 🛛	

Policy and Concept

• Our quality policies for the safety of our electric facilities

Ensuring safety

Maintaining high supply reliability

In order to ensure safety and a reliable supply amid an extremely harsh business environment, we are reviewing the way we do business, which includes checking if there are any oversights in risk management related to supply reliability, and increasing operational efficiency on the premise of not sacrificing safety and quality. While maintaining these efforts, we will carry out the following activities.

- Maintain electric facilities based on ensuring safety.
- Strive to prevent accidents caused by human error.
- Carry out our business in compliance with relevant laws, regulations and internal rules.
- Set and review quality goals in line with our quality policies.
- Confirm that front line workers are familiar with our quality policies.
- Review the appropriateness of the quality policies.

**** Goals * ***

Goals based on the materiality of the Kansai Electric Power Group



Efforts + +

Toward a safe and stable supply

We at Kansai Transmission and Distribution, Inc. work to operate power systems that provide a reliable link between power plants and consumers and optimize the configuration of facilities. We are also making thorough efforts to prevent failure recurrence. As a result of our efforts, we are maintaining one of the world's highest power quality levels in the transmission and distribution business.

Annual duration of power outage per household



ectric Power Group	Environment	Social	Governance

Kansai Electric Power Group Kansai Electric Power Co., Inc.

Kansai Transmission and Distribution, In

Achieving electricity resilience

Sustainability for the Kansai E

On September 4, 2018, the powerful Typhoon No. 21 ripped through the Kansai area, causing breakages totaling more than 1,300 utility poles and a power outage affecting roughly 2.2 million households in total. We apologize to our customers for the inconvenience and trouble caused by the extensive and long-term power outage.

Following the damage caused by Typhoon No.15 and Typhoon No.19 during the 2019 season, the Electricity Resilience Working Group compiled verification results in January 2020 regarding our response to these emergencies. Based on these results, we have created a cooperation plan to be used in an emergency with the aim of fulfilling our power supply obligations through successful restoration of the power supply. This plan specifies cooperation with general power transmission and distribution business operators and related organizations (local governments, Self-Defense Forces, etc.) in the case where significant damage has been caused, or may be caused, to power transmission and distribution equipment in an emergency. We will continue to step up our efforts for quick recovery in the event of an emergency.

By addressing issues presented by the Electricity Resilience Working Group, which have been discussed nationwide, and sharing the lessons learned from Typhoon No. 21, we are determined to fulfill our mission of supplying safe and stable electricity and supporting society. To that end, we will develop and introduce new technologies and new construction methods, as well as systematically maintaining or replacing aging equipment, aiming for prevention of accidents and prompt restoration of the power supply.

Examples of countermeasures taken following Typhoon No. 21

- Quick information gathering using smartphones
- Understanding the scope of damage using drones; using this information for restoration work
- Trial operations of power outage information collection utilizing smart meter data
- Bolstering a broad support system inside and outside the company
- Timely provision of information to the customer on power outages and restoration work

• Understanding the scope of damage using drones; using this information for restoration work

In places that are difficult to access, such as a site following a landslide, we use drones to check the status of equipment so we can quickly grasp the whole picture.

Drones are also expected to be used in restoration work, for example, using a drone for overhead wiring of a cord to replace power lines.



Damage investigation by aerial drone video



Using a drone for overhead wiring of a cord to replace power lines



A drone taking off with a cord

Sustainability for the Kansai Electric Power Group	Environment	Social		Governance
	Kansai Electric Power G	roup) (Kansai Electric Power	Co., Inc. Kan	sai Transmission and Distribution, Inc

Preventing electrical accidents

Policy and Concept

• Our quality policies for the safety of our electric facilities

• • • Goals • • •

Number of injured ordinary citizens "None"

Efforts

If something approaches, touches or damages electrical facilities of Kansai Transmission and Distribution, Inc., including transmission and distribution equipment, it may lead to not only a power outage but also to possible injury or death from electric shock. To prevent such electrical accidents, we conduct various public relations activities through mass media and on our website as well as on the website of Kansai Transmission and Distribution, Inc. As part of these activities we ask construction companies, when they perform construction work near our transmission and distribution equipment, to attach protective pipe covers for sure and not to touch the wires that have been cut.

PR campaign for accident prevention

① Announcements via our website and mass media

- Reminders to attach protective pipe covers and where to apply for these covers
- Warning about touching severed wires, etc.
- · Notice of precautions in daily life and in an emergency situation
- Prior to a typhoon, reminders to work on preventing objects from becoming projectiles
- On-site publicity

As part of our PR campaign, if we discover a construction site with protective covers not attached to electric wires, etc., we call the operator's attention to the dangers of electricity and request that they apply for the protective covers.

- ③ Featured in *Electricity and Security* published by Kansai Electrical Safety Inspection Association Our PR campaign for the prevention of accidents related to electricity on construction sites was published in the July-August 2020 issue.
- ④ On-site classes

We rent a venue for various training classes such as crane operations to introduce examples of electrical accidents as well as relevant countermeasures.

stainability for the Kansai Electric Power Group	Environment	Social	Governance

Kansai Electric Power Group) (Kansai Electric Power Co., Inc.) Kansai Transmission and Distribution, In

Introduction of a new system for renovation work for aging facilities

Efforts **

Su

Adoption of new construction method (attachment-type moving device) to remove 500-kV No. 4 transformers at the Shigi Substation

When replacing large equipment, such as transformers, on substation premises, the roller towing method is generally adopted for the transportation. Recently, we have adopted a new method which uses an attachment-type moving device. Compared to the roller towing method, it enables shorter working hours and reduces the risk of accident (injury from falling heavy objects, physical injuries when inserting rollers, etc.), and this new approach is expected to be adopted as an option for transporting large equipment. We will continue to adopt new technologies and construction methods to ensure safe operations.



Roller towing method



New construction method using an attachment-type moving device

Relevant data

	2018/3	2019/3	2020/3
Number and rate of smart meters installed	About 9.32 million (About 71%)	About 10.58 million (About 81%)	About 11.53 million (About 88%)
Specialist technicians with specialized skills	211	188	124
Number of injured ordinary citizens	7	5	4
Transmission and distribution loss rate	4.35%	5.05%	4.80%
System Average Interruption Duration Index (SAIDI)	15 min	397 min (due to Typhoon No. 21)	6 min
System Average Interruption Frequency Index (SAIFI)	_	—	0.11
Customer Average Interruption Duration Index (CAIDI)	_	—	54.55
Length of power transmission and distribution lines	Transmission lines: 18,803 km Distribution lines: 132,137 km	Transmission lines: 18,823 km Distribution lines: 132,456 km	Transmission lines: 18,804 km Distribution lines: 132,662 km

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Disaster Mitigation Efforts

Disaster mitigation efforts

Policy and Concept

• Preparing for a major disaster

To ensure the safety of our employees and their families and to fulfill our responsibilities of providing a stable supply of electricity and gas, we promote disaster mitigation initiatives that will strengthen facilities to withstand various natural disasters. We have also put in place a disaster control system to enable rapid recovery. Particularly, in the event of the Nankai Trough Earthquake, a megathrust earthquake which is feared to hit in the future, we will follow the basic plan for mitigating disaster announced by the Japanese government and take carefully planned disaster response and recovery measures in place. Considering the damage caused by typhoons that have occurred more frequently in recent years, including Typhoon No. 21 in 2018, we also implement various disaster mitigation measures, utilizing the lessons learned from past disasters. In addition, through disaster mitigation events and lectures, we

provide information on disasters and how we can be prepared, as well as carrying out activities to raise awareness on disaster mitigation in local communities.

Strengthening our disaster response system

We are enhancing our response systems to prepare for rapid initial response upon the occurrence of disasters. This includes the designation of individuals who arrive at the workplace early and night watches by initial response supervisors, along with the implementation of special training for individuals and supervisors in charge of initial response several times a year. We are also seeking to improve employees' skills in responding to disasters and increasing their awareness about disaster preparation. Together with Kansai Transmission and Distribution, Inc., we implement annual company-wide comprehensive emergency response drills under the leadership of our President in his role as the chief of the Emergency Headquarters. We do these things not only to prepare for the occurrence of the Nankai Trough Earthquake but also through considering cases with various severe conditions such as the occurrence of a nuclear power disaster at the same time or during occasions when the balance of power supply and demand is tight. In the event of a major disaster, employees will be notified of any information pertaining to the disaster at the same time. Furthermore, we have established action standards so that we can build a response system promptly after a disaster occurs, even on holidays or during the night.

Number of participants in company-wide comprehensive emergency response drills Company-wide comprehensive emergency response drills (fiscal 2019)



System * *

Kansai Electric Power: Disaster Mitigation Group, Office of General Administration Kansai Transmission and Distribution: Disaster Mitigation Group, General Administration Department

Goals **

- Improve employee skills in responding to disasters and increasing awareness about disaster preparation, through the participation of more than 800 employees in company-wide comprehensive emergency response drills.
 - \rightarrow Fiscal 2019 results: 908 employees participated
- Actively participate in emergency response drills and disaster mitigation events held by concerned external organizations.
 → Fiscal 2019 results: Drill participation: 79 times Exhibited the PR booth: 57 times Held lecture/briefing sessions: 14 times
- Hold a disaster mitigation meeting on a regular basis to respond to special information related to the risk of a Nankai Trough Earthquake and take appropriate measures to the risks related to major disasters, including other natural disasters, cyber attacks, and the spread of the novel coronavirus and/or new forms of influenza.
 - → Fiscal 2019 results: Held disaster mitigation meetings: 21 times

Efforts

Response to extremely severe natural disasters

In recent years, natural disasters have become increasingly severe. Based on what we learned from Typhoon No. 21 that hit in 2018, we established the Typhoon No. 21 Response Verification Committee to ensure an even more appropriate and robust response. From the perspective of rapid restoration of power supply following power outages, customer service and cooperation with local governments, we have implemented measures to cope with large-scale disasters. Looking specifically at rapid restoration of power supply following power outages, we utilized drones and other new technologies to gain a timely and efficient grasp of the extent of damage to equipment. We also sought support and cooperation from not just internal sources but also from our subcontractors and other general power transmission and distribution utilities, in order to strengthen the restoration work system.

Regarding customer service, we have newly introduced a Power Outage Information App, an Al-driven automated power outage information response service, and an automated information portal that utilizes a scenario-based chatbot, with the aim of disseminating power outage information and diversifying information channels. Our support system in the event of a massive blackout has also been strengthened. As part of such efforts, in collaboration with other general power transmission and distribution utilities, we have established new Transmission and Distribution Contact Centers in Aomori City and Sapporo City to answer inquiries regarding power outages and power transmission and distribution equipment.

In cooperation with local governments, we have reinforced our cooperation through prior discussions and concluding agreements on the removal of fallen trees and other obstacles, as well as mutual confirmation of which facilities are to be restored as a priority.

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Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
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Additionally, based on the lessons learned from past natural disasters, we developed an emergency collaboration plan designed for mutual support and cooperation in an emergency situation. Working together, 10 general power transmission and distribution utilities jointly submitted this plan to the Ministry of Economy, Trade and Industry.

Going forward, we will continue to share lessons learned for the future as well as steadily implementing these efforts to build a more robust business foundation to ensure safe and stable electricity and gas supply.

Strengthening collaborative ties with concerned external organizations

Even in times without disasters, we are working to build relationships with governments, police and fire departments and other concerned external organizations as well as other electric power companies in order to enable smooth mutual cooperation during times of emergency and restore electric and gas service as quickly as possible. Specifically, we proactively participate in disaster

response training sessions and programs held by local governments, designated public corporations and the like. In collaboration with the Japan Ground Self-Defense Force and Japan Maritime Self-Defense Force, we periodically carry out joint drills based on standing agreements for mutual cooperation in disaster preparedness and prevention.

Joint disaster drill with Japan Maritime Self-Defense Force Maizuru Regional Headquarters in March 2020

Contribution to raising awareness of disaster mitigation in local communities

We run booths at disaster drills and events held by local governments, and carry out activities to raise awareness of disaster mitigation using our Disaster Preparedness Handbook as well as through experience of operating seismic breakers.

Moreover, for a wide range of generations, from students to neighborhood associations, we create opportunities to explain what damage and disruption could be expected following a Nankai Trough Earthquake, as well as the damage caused by disasters in recent years, and our routine preparations. Through these efforts, we contribute to promoting understanding of the importance of disaster response and preparedness.

Disaster response after company spin-off

Even after the unbundling of the transmission and distribution sector required by law that was implemented in April 2020, in the event of a large-scale disaster such as the Nankai Trough Earthquake, the Company and Kansai Transmission and Distribution, Inc. will be united to respond to the disaster and continue to fulfill our responsibility of providing a stable electricity and gas supply.

Disaster Preparedness Handbook Disaster Preparedness Handbook is disclosed on the websites of the Kansai Electric Power Co., Inc. and Kansai Transmission and Distribution, Inc. It will help with disaster mitigation efforts in the home.





Dispatching a restoration support team to other electric companies

In September 2019, after the damage caused by Typhoon No. 15, the Group dispatched a support team to restore electricity upon the request of TEPCO Power Grid. Specifically, we sent equipment such as high- and low-voltage generators, as well as personnel for recovery and logistics work in the afflicted area, Shirako in Chiba Prefecture. Over 17 days, we offered our full cooperation to the restoration work of the TEPCO Power Grid. We will continuously and proactively cooperate in responding to natural disasters that occur in other areas to fulfill our responsibility of providing a stable electricity supply.



Emergency power transmission with high voltage power generators (Image is for illustrative purposes.) (April 2016)

Relevant data Delia

POlicy					
Emergency Policy	Established Ir h	Included in the Disaster Mitigation Plan https://www.kansai-td.co.jp/corporate/information/2020/pdf/20200605_1_01.pd			
			2018/3	2019/3	2020/3
Number of participants in co	mpany-wide comprehensive disaster respon	se training	847	907	908
Participation in disaster resp	onse training sponsored by concerned extern	nal organizations	_	_	79



Environment

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Communities

Maintaining an ongoing community dialogue

Policy and Concept

Our overall policy

As a business operator closely linked with its local communities and lives of their inhabitants, our Group fully recognizes that its own development is not conceivable without the development of the local communities associated with its business activities and therefore we will proactively contribute to the development of our local communities through initiatives to revitalize these communities and the local economy.

• Transmitting information with a positive attitude to local communities and maintaining open lines of communication

In April 2012, we set up our Community Energy Department which was at the time under the auspices of the General Planning Division with a commitment "to create the future together through dialogue." Subsequent to that, in June 2015, we established the Community Energy Division as an independent organization separate to the General Planning Division. We are striving to meet the varied requests of residents in our local communities with a positive attitude by building a relationship of trust through close communication.

Additionally, after Kansai Transmission and Distribution, Inc. was spun-off from the Company in April 2020 amid growing social demands for bolstering the resilience of our power supply, Kansai Transmission and Distribution, Inc., is well placed to be of service to the area for a long period of time due to its extensive facilities in the Kansai area, and also as a contact point between the Group and the local community. Going forward, we will continue to promote closer communication with local residents, aiming to revitalize and develop the local community.

System **

Community relations system

The Kansai Electric Power Co., Inc.: Regional Energy Division Kansai Transmission and Distribution Inc.: Regional Communications Department

Efforts **

Proactive information exchange through participation in various types of meetings and other efforts

We have been participating in governmental assemblies such as the Meeting of Members of the Union of Kansai Governments and other organizations. In addition to explaining topics such as the state of power supply and demand, electricity rates, and nuclear power operation, we also receive a variety of opinions and otherwise exchange information. We are actively working for the resolution of various energy issues in local communities based on the opinions and other ideas we receive. In recent years, how we respond to severe natural disasters such as typhoons is becoming a pressing issue, and as a result we are bolstering our cooperation with local governments regarding disaster mitigation.



Opinion exchange with government office

• Ordinary communication with government offices

We undertake mutual communication with government offices on a daily basis. When we are asked questions, we hold study groups, for example, to answer them conscientiously.



Energy study session (facility tour)

Sustainability for the Kansai Electric Power Group	Environment		Social		Governance
	Kansai Electric Power G	roup	Kansai Electric Power Co., Ii	nc.	Kansai Transmission and Distribution, Inc.

Sustainable communities" built with customers and society

Policy and Concept

Efforts for regional stimulation

As the energy needs of customers and society at large have become increasingly diverse, our Group has been carefully monitoring trends to determine exact requirements. We seek to support regional revival and invigorate local economies with a commitment "to create the future together through dialogue."

Goals **

Maintain and create demand in cooperation with stakeholders

Efforts **

• Our proactive contribution to regional revival and efforts toward the growth of the Company

We are advancing initiatives within and outside the Kansai region to develop smart communities that optimize energy supply and demand for entire regions by maximizing the use of local resources and characteristics, including renewable energy, unused energy and hydrogen as well as using ICT to connect residences, offices, factories and other locations.

Recently, there has been an increasing number of initiatives to realize sustainable communities that incorporate solutions to problems in various fields, not just limited to the energy field.

With such problem-solving communities, including smart communities, positioned as "sustainable communities," we are mounting efforts to make these sustainable communities a reality.

Furthermore, we have been making progress on our demonstration projects toward the construction of Virtual Power Plants (VPP)*, which are recently gathering attention as a power supply-demand balancing method. This is in conjunction with the launch of K-VIPS, an integrated platform that supports VPP operations.

With this technology, we will reduce grid stabilization costs, support the expanded introduction of renewable energy, and accelerate efforts to optimize energy management for the entire region.

* An IoT-based technology that remotely controls resources scattered in multiple regions (storage batteries, EV, etc.) in an integrated manner, so as to make them function like a single power plant



Virtual power plant structure demonstration project overview



• Community development activities in urban areas of Osaka

Our Company is contributing to community development in central Osaka and other locations with both hard and soft measures. One such effort is in Nakanoshima, Osaka where our head office is located.

As the secretariat of the Round Table on the Future of Nakanoshima, which seeks to further develop and invigorate Nakanoshima, we are working toward the realization of the "Nakanoshima urban renewal concept" together with land-owning businesses in the district and others. We are also contributing to the development of an environmentally conscious community. One such effort is the introduction of a regional cooling/heating system that utilizes river water. In addition, in our role at the secretariat of the "Osaka Lighting Project – City of Lights," we are working to make the Nakanoshima area more attractive by creating and maintaining the city nightscape.

Moreover, as a home-grown company, in cooperation with local governments and citizens as well as economic organizations, we will be contributing to the development of Yumeshima where the Expo 2025 Osaka, Kansai is to be held.

Examples of community development activities in urban areas of Osaka

District heating and cooling system using river water in the Nakanoshima area

In the Nakanoshima 2-chome and 3-chome areas, a regional energy management system has been introduced that uses a district heating and cooling system with river water. This system is expanding in line with the development of the surrounding areas. It will also be introduced to the Nakanoshima Museum of Art, Osaka, which is scheduled to open in 4-chome in 2021. This energy business has been selected as a "Sustainable Architecture Initiative Project (CO2-saving initiative)," which is promoted by the Ministry of Land, Infrastructure and Transport and Tourism, through joint application by Osaka City, Kanden Energy Solution Co., Inc., and our Company.

In future developments in the Nakanoshima area, our Group will continue proactively working on CO₂-saving and contributing to community development through environmental-conscious town planning.



Sustainability for the Kansai Electric Power Group	Environment		Social		Governance
	Kansai Electric Power G	roup	Kansai Electric Power Co., Ir	ic.)	Kansai Transmission and Distribution, Inc.

Coexisting with local communities

Policy and Concept

Implementation of activities for coexisting with local communities

Through the Group's business and social contribution activities, we are making a contribution to resolving local issues and revitalizing communities – part of our efforts toward a harmonious coexistence with local communities.

System **

The Kansai Electric Power Co., Inc.: Office of Corporate Communications Kansai Transmission and Distribution, Inc.: Regional Communications Department

• • • Goals • • •

Proactive contributions for coexisting with local communities

Efforts **

Contributing to the local community

We are cooperating with fire departments to inspect the electrical facilities of temples, shrines and other cultural properties. Other contributions include helping local residents beautify their surroundings.



Electrical equipment inspection at the Kagiya Museum, a historical building



Cleaning activities at the Kasuga-Taisha Shrine



Community cleanup activities

Disaster recovery efforts

In the event of an emergency such as a typhoon, all the group companies shall unite to work together, regardless of whether the disaster has struck in an area in which we operate or not, through on-site responses, cooperating with related autonomous bodies and dispatching support teams to the area – regardless of whether we supply power there or not – aiming for rapid recovery and to ensure safe and stable electricity supply.



Dispatching a support team to an area where we are not involved with power supply (Typhoon No. 19, October 2019)



Preparation work for emergency power transmission (Typhoon No. 15, September 2019 in Togane City, Chiba)



Inc, we will provide new values based on global issues and needs across society, by providing LED lantern rental services for non-electrified regions in Africa, for example.



Tanzanian children using a lantern

At the Tokyo International Conference on African Development (TICAD7)

Social welfare efforts

Since 2001, we have been holding Kanden Collabo Art exhibit that provides an opportunity for individuals with disabilities to display their works. Visitors can appreciate the art and sense the potential of the artists. Works selected for exhibiting can also be seen on our website.



Open exhibition (Dojima River Forum)



Traveling exhibition (Kobe Lamp Museum)

• Promoting art and cultural activities and nurturing the next generation

We are working to promote local culture by holding painting exhibitions and providing venues for classical music concerts, as well as to nurture the next generation by holding puppet shows for parents and children.



Mihama Art Exhibition







Kanden Family Theater

• Coexistence and co-prosperity with local communities where our power plants are located

As a member of the local community, we strive to revitalize and contribute to the local communities where our power plants are located by promoting the revitalization of the local economy as well as investing in community development and running local events, etc., together with local residents.



Cooperating with the management of the Furusato Marathon sponsored by Mihama Town and Hiroshi Itsuki, a singer



Opening a store at the Wakasa Takahama Blowfish Festival and Takahama Town Industry Festival

Support for employees engaged in social contribution activities

To support employees engaged in community activities or volunteer programs, we established a volunteer time-off program, among other initiatives. We published a Social Contribution website on our company web portal that provides information on the activities of volunteers and various workplaces.



Sustainability for the Kansai Electric Power Group	Environment		Social		Governance
	Kansai Electric Power G	roup	Kansai Electric Power Co., II	пс.	Kansai Transmission and Distribution, Inc.

Active communication inside and outside the Company

Policy and Concept

Communication inside and outside the Company through public relations and public hearing activities

Through public relations and public hearing activities, we deliver information to our stakeholders in an appropriate manner to promote their understanding of our Group businesses. Their opinions and requests are shared with management and employees and reflected in our business activities so we can keep their trust.

We will seek their understanding of our Group businesses and conduct highly transparent and open business activities with the thought represented by our brand statement, "power with heart."

System **

The Kansai Electric Power Co., Inc.: Office of Corporate Communications Kansai Transmission and Distribution, Inc.: Regional Communications Department



Goals **

Acquiring understanding of the Group's business Increasing brand value through empathy for our corporate stance

Efforts **

Improving information disclosure

Through our Securities Reports, Corporate Governance Reports, Integrated Reports, etc., the Group proactively discloses financial information to shareholders and other stakeholders, such as the Company's financial position and operating results, as well as non-financial information related to management strategies and issues, risks, and governance. Regarding contents stipulated by the Companies Act and other laws as well as information that is considered to be useful for dialogue with our shareholders and other stakeholders, we strive to offer detailed and accurate explanations that add value. We also provide overseas investors with information as needed through English-language media.

The Group facilitates constructive dialogue with its shareholders and investors to gain their understanding of the Group's basic stance, encompassing legal compliance, and basic management policies including our Medium-term Management Plan. By reflecting the opinions we receive in our approach to business management, we will, over time, restore the trust of our stakeholders and build a solid relationship based on trust.

Working with the media

Information reported by television and newspapers has a significant impact on stakeholder perceptions of and attitudes toward our Group. We hold press conferences with our president and make other efforts to provide information actively to the media. At the same time, we respond accurately and in a timely manner to media inquiries to promote understanding of our business operations.

Sharing information through mass media

We utilize various forms of mass media to convey information about our efforts associated with our brand statement, "power with heart," and the business activities of our Group to customers and other members of society in a timely and appropriate manner. We are taking advantage of the strengths of each type of media such as television commercials and newspaper advertisements when providing information. We will continue working to build understanding of our Group businesses.

TV commercials and newspaper ads

We take advantage of the strengths of each type of media when providing information. Television commercials can convey information in an easy-to-understand manner with video and music while newspaper advertisements enable readers to take time to review relatively large amounts of information.

Information released on our website

Keeping up with diversification of the web media environment, the Group is intent on communicating with even more customers by delivering information according to the characteristics of each type of media, focused on websites, social media, and online video.

Delivering information via our website

We are making continuous improvements to our website, aiming to make it easier for customers to view and understand. Along with our attitude and thoughts regarding the safe and stable supply, we will proactively send out information on our new businesses, innovations, international businesses, and other challenges in new business areas.







Our Company's website

Information dissemination via social networks

We disseminate information on social media making good use of the characteristics of each type of media, in the hope that this information on the Group's businesses will strike a chord. On Facebook and Twitter, through posts focused on our employees performing their work, we strive to make people become familiar with the Kansai Electric Power Group's business. On Instagram, we introduce beautiful scenes of the Kansai region, with the theme of "lighting."



Our Group's Facebook account



Our Group's Twitter account



Our Company's Instagram account

Environment

Kansai Electric Power Co., Inc. (Kansai Transmission and Distribution, Inc.

Publishing videos online

We have published videos related to our attempts to create a thermal power generation device - a reproduction of the LNG thermal power generation mechanism with our original device as well as a set of videos that we called the "Anthropomorphic Equipment Series," in which our power generation equipment is personified. Our equipment is introduced using stories with a human touch. We hope that people who view these videos will feel some kind of affinity with power generation and our Company.



Our attempt to create a thermal power generation device



Equipment with a human touch

Efforts to promote understanding about energy

The Group is actively working to help our stakeholders deepen their understanding about energy. For example, we conduct "on-site" classes and produce public relations resources. Through various opportunities and efforts, we will strive to promote deeper understanding about energy.

"On-site" classes

To encourage children – the next generation – to be more concerned about Japan's energy situation and environmental issues, our Group's employees visit elementary and junior high schools as instructors to hold "on-site" classes.





"On-site" classes



Our employees put "power with heart" into practice and inter-company and inter-group communication is vitalized by sharing important matters in business management, such as nuclear power generation, information about our businesses and initiatives related to "power with heart."



Communication between management and employees



Distributing the President's video message over in-house TV, etc

Reflecting the voice of society in our business activities

The Group pays attention to the voices of stakeholders, shares the opinions and requests received with management and employees, and reflects these opinions and requests in our business activities as part of our efforts to earn trust.

Relevant data

	2018/3	2019/3	2020/3
Efforts to promote understanding by local governments	About 6,200	About 4,600	About 5,100
Volunteer time-off program	57 (184.5 days)	63 (161.5 days)	87 (201 days)
Number of social contribution activities (including "on-site" classes)	1,369	864	1044
Amount of social contribution activities	40 million yen	48 million yen	48 million yen
Amount of donations made	361 million yen	430 million yen	468 million yen
	2018/6	2019/6	2020/6
Total number of sustainable community development plans realized	5	7	10

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Inc.

Supply Chain Management

Policy and Concept

CSR-based Procurement Policy

With safety as the highest priority and the ideal of cost reduction and stable procurement at the same time, the purchasing divisions of our Group are procuring materials and services that are outstanding in terms of safety, quality and price at appropriate times. We follow our Action Standards for Procurement Activities, which is comprised of seven items, including quality maintenance, consideration of the environment and human rights, and thorough compliance. Doing so, we undertake purchasing activities based on corporate social responsibility and endeavor to contribute to society and create value.

Since these purchasing activities are supported by our suppliers, who are valuable partners, we are using contract negotiations, supplier visits and other opportunities to work to explain our CSR-based Procurement Policy and deepen their understanding of our efforts. In fiscal 2019, we conducted questionnaire surveys targeting key business partners and confirmed the status of their CSR efforts. We will continue working on CSR activities in the future.

Action Standards for Procurement Activities

- 1. Place the highest priority on safety.
- 2. Promote cost reduction efforts.
- 3. Ensure the stable procurement of equipment, materials, and services while maintaining or improving quality and technical expertise.
- 4. Establish strong partnerships.
- 5. Contribute to society and always consider the health of the environment.
- 6. Maintain the openness and transparency of all business transactions.
- 7. Fully comply with laws and regulations.

System **

Director responsible: Nobuhiro Nishizawa (Executive Vice President) Management office: Planning & General Management Group, Sourcing and Procurement Division

**** Goals * ***

• Implementation of the CSR-based Procurement Policy and promotion of their adoption by suppliers

CSR questionnaire implementation rate for new suppliers (Sourcing and Procurement Division contracts) 100%

ightarrow Implementation rate of 100% is ongoing (implemented for all 22 newly registered suppliers in fiscal 2019).

- Implement CSR questionnaire in fiscal 2019-2021 for our top 200 business partners whose transaction amounts are among the largest.
 - → Being implemented at a pace whereby the target may be achieved by the end of 2021 (101 companies completed out of 200 companies).

• • • Efforts • • •

• Implementation of an internal training and supplier questionnaire, and establishment of a Procurement Review Committee

The Sourcing and Procurement Division provides CSR-related training as part of our new employee training program, for the purpose of implementing the CSR-based Procurement Policy and promoting their adoption by suppliers. We also confirm how well CSR is being understood through regular skill checks.

We take supplier registration and other opportunities to explain our CSR-based Procurement Policy to our business partners, and conduct CSR questionnaires to see how they address tasks such as consideration to the environment, respect for human rights, improvement of the working environment, and thorough compliance.

Additionally, in order to ensure the appropriateness and transparency of construction orders and contract procedures, we have set up a Procurement Review Committee, which includes external members. The Committee regularly examines the procurement process and provide guidance and advice from the perspective of external experts.
Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
	Kansai Electric	Power Group Kansai Electric	Power Co., Inc. Kansai Transmission and Distribution, Inc.
 Relevant data 			
Policies			
CSR-based Procurement Policy	Estal	blished https://www.ke	epco.co.jp/sustainability/csr/mind/proc/index.html
Code of Conduct and Procurement Po	licy for Suppliers Estal	blished https://www.ke	epco.co.jp/sustainability/csr/mind/proc/client.html



Environment

Kansai Electric Power Co., Inc. Kansai Transmission and Distribution, Ir

Social

Corporate Governance

Basic concept on corporate governance

Based on the Management Philosophy and Kansai Electric Power Group Vision, the Group will continue to meet the expectations of all its stakeholders, thereby contributing to the sustainable improvement of corporate value and the sustainable development of society. Recognizing that the most important management issue for achieving this goal is strengthening corporate governance, we have adopted the institutional design of a Company with a Nominating Committee, etc. since June 2020, which clearly separates execution and supervision for our corporate governance, with the aim of enhancing management transparency and objectivity in business management. In terms of supervision, in order to reflect the perspectives of all our stakeholders, we have established a system with a Board of Directors at the core focused on objective and diverse perspectives as outsiders. By appropriately supervising execution, we will improve transparency and objectivity in business management.

Each one of our executive officers and employees will carry out business activities while ensuring integrity and a high level of transparency in accordance with our principles of Guidelines for Action, the Kansai Electric Power Group CSR Action Charter, and the President's Oath to Stakeholders. With explicitly defined authority and responsibilities, we will strive to maximize our corporate value by swiftly and flexibly making decisions and putting them into practice.

Overview of current corporate governance

In our Company, the Executive Meeting and various committees are placed under the Board of Directors, which has been charged with management responsibility by the General Shareholders' Meeting. While executing operations appropriately, we supervise the execution of duties by our directors and executive officers through the Board of Directors.



* The Kansai Electric Power Co., Inc. will also implement an appropriate governance system for Kansai Transmission and Distribution, Inc., insofar as the Company has the right to do so as its shareholder, based on the premise of ensuring neutrality as a general power transmission and distribution business operator.

Kansai Electric Power Co., Inc.

Kansai Transmission and Distribution, Inc.

Corporate governance systems

1. Supervision ***

Board of Directors

Structure and operational status

In light of the scale, content and managerial challenges of our business, as well as from the perspective of a supervisory function, taking into account diversity across gender and nationalities, the Board of Directors is a necessary and appropriate structure chaired by an independent outside director and comprised of independent outside directors with ample experience and knowledge cultivated as executives or professionals in a wide range of fields (eight persons) and inside directors who have expertise and abilities in each field of our businesses (three persons). Finally, there are two more inside directors who conduct audits taking advantage of specialized knowledge regarding our businesses.

The Board of Directors meeting is convened regularly once a month, complemented by additional meetings held when deemed necessary, where matters of essential importance in business management, including basic policies, are deliberated and decided. In addition, all directors and executive officers are supervised through regularly issued reports on the execution status of the duties incumbent upon them and other aspects of their performance. In fiscal 2019, the Board of Directors meeting was held 16 times and the attendance status of respective officers as of April 1, 2020 was as follows.

Managerial Position	Name	Attendance numbers
President and Director	Takashi Morimoto	15
Director	Toyokazu Misono	16
Director	Koji Inada	16
Director	Takao Matsumura*	14
Director	Yasuji Shimamoto	15
Outside Director	Noriyuki Inoue	14
Outside Director	Takamune Okihara	16
Outside Director	Tetsuya Kobayashi	15
Outside Director	Hisako Makimura*	14
Audit & Supervisory Board Member	Yasuhiro Yashima	16
Audit & Supervisory Board Member	Yasushi Sugimoto*	14
Audit & Supervisory Board Member	Yukishige Higuchi	16
Outside Audit & Supervisory Board Member	Tsutomu Toichi	16
Outside Audit & Supervisory Board Member	Fumio Ohtsubo	16
Outside Audit & Supervisory Board Member	Shigeo Sasaki*	14
Outside Audit & Supervisory Board Member	Atsuko Kaga*	11

Note: In fiscal 2019, we held the Board of Directors meeting as a Company with an Audit & Supervisory Board.

* Mr. Takao Matsumura, Ms. Hisako Makimura, Mr. Yasushi Sugimoto, Mr. Shigeo Sasaki, and Ms. Atsuko Kaga assumed the post of Director/Audit & Supervisory Board Member on June 21, 2019. Since then, the Board of Directors meetings that they have been a part of have been held 14 times.

Roles and responsibilities

Based on the standpoints of our diverse and wide-ranging set of stakeholders, the Board of Directors aims to achieve sustainable growth and increase the corporate value of the Group over the medium to long term. To achieve these ends, the Board takes on the following main responsibilities: ① to illuminate the future path of the Group, including our corporate strategy, ② develop an environment that supports appropriate risk-taking by executive officers, and ③ provide highly effective supervision of management from an independent and objective standpoint.

We will decide basic management policies such as management plans after thorough discussions from a variety of perspectives, regularly monitor progress and reflect results in our future policies. In addition, we will establish effective internal control and risk management systems, supervise management with a focus on compliance, and support executive officers for their swift and strong-minded decision-making.

From the standpoint of clearly separating execution and supervision, the Board of Directors, in principle, delegates decisions on business execution to executive officers in line with basic management policies. Regardless of whether or not delegation to executive officers is made, if necessary, especially important decisions on business execution are discussed in advance at the Board of Directors meeting while they are being considered, and appropriate opinions and advice are provided from outside directors and other directors before decisions are made.

Nominating Committee

The Nominating Committee, which consists of independent outside directors only, resolves proposed agenda for General Shareholders' Meeting regarding the appointment and dismissal of directors after establishing the "Policy for nominating director candidates." The Committee also resolves/deliberates on matters related to the appointment of executives. In addition, the Committee is responsible for formulating and operating a successor plan for the Executive Officer and President. When appointing the Executive Officer and President, its members interview candidates and, if necessary, utilize external evaluations from a third-party organization. Sufficient time and resources shall be spent on this appointment process, with the objectivity of the process ensured.

Chairperson: Sadayuki Sakakibara

Committee members: Takamune Okihara, Tetsuya Kobayashi and Kazuko Takamatsu

Compensation Committee

The Compensation Committee, which consists of independent outside directors only, resolves compensation of respective directors and executive officers after establishing the "Policy for determining the compensation of directors and executive officers." The Committee also resolves/deliberates on other matters related to executive compensation. When considering various compensation-related issues, such as the standard of compensation of directors, we use data from external specialized organizations and examples from other companies.

Chairperson: Tetsuya Kobayashi

Committee members: Sadayuki Sakakibara, Takamune Okihara and Atsuko Kaga

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Audit Committee

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The Audit Committee is chaired by the independent outside director and consists of four outside and two inside directors not concurrently serving as executive officers. For directors who make up the Audit Committee, those who have appropriate experience and abilities as well as necessary knowledge of finance, accounting and legal affairs shall be appointed.

The Audit Committee establishes basic policies and rules necessary to execute its duties, and then audits the execution of duties by executive officers, directors, employees and others of the Company or its subsidiaries, from the viewpoint of legality and appropriateness. In addition to that, the Committee reports the status and results of audits to the Board of Directors.

The Audit Committee, the Office of Internal Auditing and accounting auditors will conduct efficient and effective audits in close collaboration as appropriate through exchanging opinions on audit plans and audit results.

The Committee members are engaged in auditing activities on a daily basis through their attendance at important meetings (other than Board of Directors meetings) to audit operations and assets of our key business offices.

Chairperson: Hiroshi Tomono

Committee members: Shigeo Sasaki, Atsuko Kaga, Fumio Naito, Yasushi Sugimoto and Susumu Yamaji

In fiscal 2019, the Audit & Supervisory Board meeting was held 18 times and the attendance status of respective Audit & Supervisory Board Members was as follows.

Managerial Position	Name	Attendance numbers	
Audit & Supervisory Board Member	Yasuhiro Yashima	18	
Audit & Supervisory Board Member	Yukishige Higuchi	18	
Audit & Supervisory Board Member	Yasushi Sugimoto*	14	7
Outside Audit & Supervisory Board Member	Tsutomu Toichi	18	
Outside Audit & Supervisory Board Member	Fumio Ohtsubo	18	
Outside Audit & Supervisory Board Member	Shigeo Sasaki*	14	Ν
Outside Audit & Supervisory Board Member	Atsuko Kaga*	11	

Mr. Yasushi Sugimoto, Mr. Shigeo Sasaki, and Ms. Atsuko Kaga assumed the post of Audit & Supervisory Board Member on June 21, 2019. Since then, the the Audit & Supervisory Board meetings that they have been a part of have been held 14 times.

Note: In fiscal 2019, we held the Audit & Supervisory Board meeting as a Company with an Audit & Supervisory Board.

Compliance Committee

For the purpose of strengthening the Group's function to supervise compliance, we have established a Compliance Committee, which is independent from the President and other executive officers. The Committee is under the direct control of the Board of Directors. The Committee, a majority of which including the Chairperson are external experts, deliberates and approves particularly important matters such as basic policies for promoting compliance and policies for addressing problematic events associated with directors, executive officers, and others. When necessary, the Committee also directly guides, advises and supervises the President and other executive officers, as well as reporting periodically to the Board of Directors.

Directors

Nomination policy

Our directors shall conduct themselves in performing their duties with emphasis on compliance and be willing to put these into practice, in accordance with the basic orientation of business management and code of conduct specified in our Management Philosophy, our Guidelines for Action, the Kansai Electric Power Group Vision, the Kansai Electric Power Group CSR Action Charter, etc.

Regarding the nomination of director candidates, the Nominating Committee makes a decision after deliberating comprehensively on whether the candidate's ability, experience, personality, insight, and other elements are good enough to take on management of the Company, also in light of diversity, including gender and internationality, from the viewpoint of appropriate decision-making and effective supervision. As for outside director candidates, we will ensure in particular that they have independence from an outsider's objective viewpoint and also

take into account their role of enhancing the supervisory function of the Board of Directors.

We will assess the independence of outside directors, after confirming that the requirements for independent officers stipulated by the Tokyo Stock Exchange are met, as well as the details of transactions made between our Company and outside director him/herself or any company at which the outside director is/was operating business now or in the past.

If an outside director concurrently serves as an officer at another listed company, the number of concurrent positions should be within a reasonable range so that the time and labor required to properly fulfill the roles and responsibilities as an outside director of the Company can be secured.

Roles and responsibilities

Directors shall actively express their opinions and have thorough and constructive discussions at the Board of Directors, etc. When executing their duties, directors shall diligently collect sufficient information by requesting explanations from other directors and executive officers and through other means.

Outside directors' roles include strengthening the supervisory function of the Board of Directors from their objective external perspective, making use of their abundant experience and insight as corporate managers and specialists. Additionally, from the perspective of actively contributing to discussions at the Board of Directors, outside directors actively exchange opinions and cooperate fully with executive officers.

Sustainabilit	y for the Kansai	Electric Power	Group
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Training

We hold training sessions for directors when and after they take up their post on a periodical basis to provide the knowledge necessary to fulfill their roles and responsibilities.

For outside directors, we provide explanation about the Group's business, finances, organization, and other aspects on a continual basis when and after they take up their post so they can acquire the knowledge necessary to fulfill their roles and responsibilities. In addition, we hold tours of our facilities as appropriate and provide opportunities for them to talk with our frontline staff to promote their understanding of our business.

• • • 2. Execution • • •

Executive Officers

Appointment policy

Our executive officers shall conduct themselves in performing their duties and be willing to put them into practice with emphasis on compliance in accordance with the basic orientation of business management and code of conduct specified in our Management Philosophy, our Guidelines for Action, the Kansai Electric Power Group Vision, the Kansai Electric Power Group CSR Action Charter, etc., and in adherence to the spirit of the President's Oath to Shareholders. Regarding the appointment/dismissal of executive officers, the Board of Directors makes a decision after deliberating comprehensively on whether the officer has abundant expertise, and whether their experience, business execution ability, personality, and other elements are good enough to take on management of the Company.

Roles and responsibilities

Executive officers make decisions on how the business of the Company is carried out, which is delegated to them by the Board of Directors and by the resolution of the Board of Directors.

Training

We hold training sessions for executive officers when and after they take up their post on a periodical basis to provide the knowledge necessary to fulfill their roles and responsibilities.

Executive Meeting and Committees

In order to deliberate on important business execution policies, plans, and execution of business for the entire Group and to receive necessary reports, based on the basic policies determined by the Board of Directors, we hold Executive Meeting every week as a general rule. The Executive Meeting is chaired by Executive Officer and President, and consists of all our executive officers to ensure swift and appropriate corporate management. In addition to the above, for the purpose of ensuring appropriate and smooth business execution, we have established various committees that support decision-making through the Executive Meeting and the business execution by respective divisions. These committees mostly consist of executive officers in charge of duties related with respective goals, and meetings are convened periodically or on an as-needed basis.

[Sustainability and CSR Promotion Council]

To address sustainability-related issues, our Group's basic concept and code of conduct that we should strictly observe are stipulated in the Kansai Electric Power Group CSR Action Charter. We have also set up a Sustainability and CSR Promotion Council to draw up comprehensive sustainability and CSR measures for the entire Group and check implementation status. At the same time, we perform concrete activities by developing comprehensive CSR measures for the Group to contribute to the sustainable growth of society.

[Risk Management Committee]

Risks associated with business activities are to be managed autonomously by each operating division in accordance with the Kansai Electric Power Group Risk Management Rules. Risk management for risks considered to have cross-organizational importance is enhanced by the supervision of departments with specialized expertise on such risks that provide advice and guidance to the various operating divisions. Furthermore, a Risk Management Committee has been established to put risks under central management. The Committee Chairperson is appointed as the Risk Management Officer, and the Committee strives to manage risks associated with Group business activities at the appropriate level through this system.

[Nuclear Safety Verification Committee / Nuclear Safety Enhancement Committee]

Regarding nuclear safety, our principles associated with nuclear safety to be succeeded to our employees in future generations are clearly stated in our Commitment to Enhancing Nuclear Safety. Based on this, we are making constant efforts to improve safety. A Nuclear Safety Enhancement Committee has been set up to enhance the safety of nuclear power on a company-wide basis. The Committee checks and conducts discussion on the promotion of recurrence prevention measures and fostering of safety culture following the accident at Mihama Nuclear Power Station Unit 3 and activities from a broad range of viewpoints, including voluntary and continuous activities following the accident at Tokyo Electric Power's Fukushima Daiichi Nuclear Power Station. In addition, opinions and advice provided by the Nuclear Safety Verification Committee from its independent position have been reflected in our safety improvement initiatives.

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[Procurement Review Committee]

For the purpose of ensuring appropriateness and transparency in the procedures of construction orders and contracts as well as payment of donations and cooperation funds, we have established a Procurement Review Committee, a majority of which are outside experts. By building an examination mechanism from the perspective of outside experts, we will ensure the appropriateness and transparency of procedures of construction orders and donations.

[Internal Auditing Committee]

Regarding internal audits, we have established an Internal Auditing Committee in order to share and deliberate widely-ranging management issues, such as safety and quality, gain insights and information from outside the Company, and ensure the adequacy of the internal audit process for the entire Group from a fair and professional standpoint.

In addition, as a dedicated organization for conducting internal audits, the Office of the Internal Auditing Committee has been set up to audit the adequacy and effectiveness of the system and operational status on a regular basis, this ensuring the adequacy of operations.

• • • 3. Effectiveness evaluation and response policies for the Board of Directors • • •

The Board of Directors uses a third-party organization to conduct an annual questionnaire survey targeting all directors on the effectiveness of the Board of Directors. Based on the aggregated results of the questionnaire, the Board of Directors evaluates its effectiveness and takes proper steps to improve corporate governance, including operation of the Board of Directors.

In 2019, a questionnaire survey on the effectiveness of the Board of Directors was not conducted. Regarding the problem of receiving money and gifts, a Third Party Committee has pointed out the failure of our corporate governance. Following this, we formulated a business improvement plan aiming to prevent recurrence and transformed to a company with a nominating committee. In order to further strengthen the supervisory function of the Board of Directors, we will clearly separate execution and supervision, and construct an effective governance system that emphasizes an outsider's objective viewpoint.

• • • 4. Senior advisor/advisors (appointment/remuneration determination process and roles) • • •

Appointment/remuneration determination process

From the perspective of ensuring objectivity, when appointing a senior advisor or advisor, etc. to a person who retired from the post of a director or executive officer, the Nominating Committee, the Compensation Committee, and the Board of Directors shall decide the necessity of such appointment, job description, and remuneration after rigorous deliberation, and will disclose the commissioned duties and the total amount of remuneration of the advisor, etc.

Roles

The senior advisor or advisor, etc. shall contribute to the development of the Company mainly through activities in business communities and external activities, and shall not be involved in the business management of the Company.

• • • 5. Remuneration of directors and executive officers • • •

Remuneration of directors and executive officers is determined by the Compensation Committee in accordance with the provisions of the Companies Act. Remuneration of directors not responsible for execution of business consists only of basic compensation, in consideration of their roles. Remuneration for executive officers responsible for the execution of business consists of basic compensation that takes into account the responsibilities required for each executive officer's position, etc., and short-term incentives, which are results-based compensation and stock-based compensation as a medium- to long-term incentive, in order to contribute to the sustainable improvement of our corporate performance and corporate value. Proportion of the payment will be set using "basic compensation: results-based compensation: stock-based compensation = 6:3:1" as a guide. Details of the remuneration system for directors and executive officers are included in our Financial Statements for the (96th term) fiscal year ending in March 2020.

• • • 6. Management of subsidiaries • • •

We try to instill in our subsidiaries the basic approaches to management and action standards that are embodied in, for example, our Management Philosophy, our Guidelines for Action, the Kansai Electric Power Group Vision and the Kansai Electric Power Group CSR Action Charter. In addition, we ensure the propriety of our corporate group's business activities at our subsidiaries by supporting them and providing advice on the arrangement of their autonomous management structures based on our internal regulations related to subsidiary management.

We also strive to prevent any losses to the corporate value of the Group as a whole, or at least keep them to a minimum, by participating in important decision-making by our subsidiaries, and periodically checking on their management status. In addition, our Executive Meeting deliberates execution directions and plans for important business, particularly for the core companies responsible for businesses that are the pillars for the future growth of the Group.

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◆ ◆ 7. Restructuring of the Governance System at the Nuclear Power Division ◆ ◆ ◆

In order to make the Nuclear Power Division an organization with sound governance and transparency, we have created the position of Acting Division Manager in charge of compliance, and appointed Audit Mission Directors who regularly work at the Division as staff members of the Audit Committee, thereby strengthening the supervision and audit functions of the Division.



Execution

Strengthening checks and support at the Nuclear Power Division

\langle Establishment of an Acting Division Manager, etc. in charge of compliance \rangle

In order to strengthen compliance checks and support, we have created the position of Acting Division Manager, responsible for compliance and administrative divisions. This Acting Division Manager will be regularly stationed at the Nuclear Power Division. We have also appointed Audit Mission Directors who are also at the Nuclear Power Division as staff members of the Audit Committee to enhance the audit function of the Division. Furthermore, in order to strengthen the compliance promotion function of the Nuclear Power Division, the Compliance Promotion Group has been newly established. This group promotes compliance at the Nuclear Power Division in cooperation with the Office of Compliance Promotion.

$\langle {\sf Participation \ of \ executives \ from \ other \ divisions \ in \ major \ meetings} \rangle$

In order to strengthen checks and support across our business as a whole, executives from other divisions, such as Corporate Planning, Accounting, Human Resources and Safety Management shall participate in major meetings held at the Division.

Efforts to create an open organization

(Holding the Board of Directors meetings, etc. at the Nuclear Power Division (Mihama Town, Fukui Prefecture))

The meetings of Board of Directors, Compliance Committee, Nuclear Safety Enhancement Committee and others will be held regularly at the Nuclear Power Division in Mihama Town to bridge the gap between executives and employees of the Division and executives of other divisions including those external to the Company. We will look into the specific timeline for implementation taking into account the impact of the novel coronavirus.

(Periodical dialogue of executives, including those external to the Company, with members of the Nuclear Power Division)

To sweep away any sense of a closed organization, we will provide opportunities for external officers and executives from other divisions to engage in dialogue with a wide range of people in the Division on a regular basis.

$\langle {\rm Promoting\ personnel\ exchange\ with\ other\ divisions}\rangle$

To ensure that the people who will undertake the future of the nuclear power business think deeply from the "user's perspective" and keep taking action to and sweep away any sense of a closed organization, we will provide them with experiences working in divisions other than the nuclear power business or send them outside the company, as well as looking to hire more from various sectors other than the nuclear power business.

Relevant data

	2020/6
Ratio of independent outside directors to all directors	61.5%
(Number of independent outside directors / Total number of directors)	(8 / 13)
Ratio of female directors to all directors	15.3%
(Number of female directors / Total number of directors)	(2 / 13)
Ratio of independent outside directors in the Nominating Committee	100%
(Number of independent outside directors / Total number of directors)	(4 / 4)
Ratio of independent outside directors in the Compensation Committee	100%
(Number of independent outside directors / Total number of directors)	(4 / 4)
Ratio of Independent outside directors in the Audit Committee	66.7%
(Number of independent outside directors / Total number of directors)	(4 / 6)

	2018/3	2019/3	2020/3
Attendance rate at the Board of Directors meetings (Directors and Audit & Supervisory Board Members)	96.5%	98.8%	97.6%



Policy and Concept

In accordance with the Kansai Electric Power Group Risk Management Rules established in April 2006, risks that have the potential to affect the achievement of organizational goals are to be recognized and identified. Then, an assessment is to be made, followed by implementing necessary measures to deal with the risks. The impact of risk on the Group is to be managed at an appropriate level through this series of processes.

System **

Risks associated with the Group's business activities are to be managed autonomously by each operating division based on the Kansai Electric Power Group Risk Management Rules. Risk management for risks considered to have cross-organizational importance, such as information security, management of subsidiaries, safety and health, market risk, reliability of financial reports, environment, disasters and compliance, is enhanced by the supervision of departments with specialized expertise on such risks that provide advice and guidance to the various operating divisions. Furthermore, with the Risk Management Committee established, we are striving to manage risks associated with the Group's business activities at an appropriate level under a system whereby the Chairperson of this committee is our Risk Management Officer.

Risk Management System



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Efforts **

The Risk Management Committee identifies key risks that could greatly affect the business activities of our Group from the perspectives of establishing business foundations to fulfill our duty to provide a safe and stable power supply and of responding appropriately to changes in the business environment. The Committee also ascertains and evaluates how these risks are being managed from a company-wide perspective to give

operating divisions, as necessary, instructions for improvement based on the evaluation results. The gravities of risks are also evaluated in consideration of their degrees of impact and their possibilities of occurrence. By placing them on a map, we obtain an overview of the state of risk management and manage them accordingly. The risk evaluation results are also presented to our Executive Meeting and our Sustainability and CSR Promotion Council so that necessary risk measures are reflected in plans and policies for the entire Group with the aim of realizing sustainable growth into the future.

The Committee periodically reports its risk management findings to the Executive Meeting and the Board of Directors. If necessary, it improves the structure and system of risk management.



Probability of occurrence

The main risks that may affect the operating results and financial position of the Group (the Company and its consolidated subsidiaries) are as follows.

① Changes in the environment surrounding the electric power business	② Fluctuations in total electricity sold and selling prices	(3) Fluctuations in fuel costs and purchased electricity fees
④ Other businesses	③ Interest rate fluctuations	⁽⁶⁾ Operational risks
⑦ Information management	(8) Compliance	(9) Other: The Novel Coronavirus

① Changes in the environment surrounding the electric power business

The electric power business may experience drastic changes in the composition of power sources and intensifying competition from other business operators. Such changes depend on how the energy mix will be determined going forwards, future changes in the situation in consideration of the full liberalization of retail sales, and trends in detailed system design for future electric power systems.

The nuclear back-end business such as reprocessing of spent fuels is an ultra-long-term business involving uncertain outcomes, but operating risks are reduced by institutional measures taken by the government. The nuclear back-end cost burden may increase due to future system revisions and fluctuations in estimated future costs.

In addition, regarding the general contribution of the Nuclear Damage Compensation and Decommissioning Facilitation Corporation, our overall costs may increase due to changes in the total burden and contribution rate in the future.

Furthermore, as a leading "decarbonization" company, we will endeavor to reduce our environmental load, including addressing climate change issues. However, future trends of Japan's environmental policy and international framework may affect the Group's business operation in the future.

The Group's business performance may be affected by the aforementioned changes in the environment surrounding the electric power business.

^②Fluctuations in total electricity sold and selling prices

We will make the most of our capability to provide solutions that we have cultivated so far to deliver "safe, comfortable and convenient" not to mention economical energy services. However, total electricity sales may vary depending on the weather (especially temperature), which is the main variable factor in heating and cooling demand, economic trends, progress in energy conservation, changes in electricity usage brought by technological innovations, competition with other business operators and so on. Selling prices are also subject to change due to competition with other business operators and prices traded on the Japan Electric Power Exchange, which may affect the Group's business performance.

③Fluctuations in fuel costs and purchased electricity fees

The main thermal fuels in the electric power business are LNG, crude oil, coal and the like. For this reason, thermal fuel costs and purchased electricity fees fluctuate according to trends in crude oil prices, foreign exchange rates, price negotiations and other factors, which may affect the Group's business performance.

However, the "fuel cost adjustment system," which reflects fluctuations in crude oil prices and foreign exchange rates to electricity prices, enable us to adjust electricity prices when fluctuations in fuel prices are within a certain range. This mitigates the impact on the Group's business performance.

Additionally, the Group's business performance may be affected by fluctuations in thermal fuel costs and purchased electricity fees resulting from fluctuations in total electricity sales as well as increases/decreases in hydropower generation caused by fluctuations in annual rainfall and snowfall.

However, the impact on the Group's business performance will be mitigated because certain adjustments are made based on "Drought Reserves" for increases/decreases in hydropower generation.

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④Other businesses

Toward sustainable growth, the Group demonstrates its comprehensive strengths in creating new businesses and services, including gas and other energy businesses, information and communications, lifestyle and business solutions, as well as our overseas electricity business. We operate various businesses in Japan and overseas to provide solutions across a wide range of issues for our customers and society. The Group's business performance may be affected by laws and regulations, technological innovations, progress in competition with other business operators, fluctuations in crude oil prices, foreign exchange rates, etc., inherent risks associated with overseas business expansion, and other changes in the business environment.

Interest rate fluctuations

The balance of interest-bearing debt of the Group (consolidated) was 4,096,665 million yen (equivalent to 53.8% of total assets) as of March 31, 2020, and the Group's business performance may be affected by future trends in market interest rates. However, 89.2% (3,656,143 million yen) of the balance of interest-bearing debt is made up of long-term loans payable and long-term corporate bond funds, most of which are financed at fixed interest rates. Given the above, the impact of interest rate fluctuations on the Group's business performance is considered to be limited.

⁶Operational risks

The Group, which primarily operates an electric power business, owns electric power supply facilities and many other facilities. To ensure the safe and stable supply of electricity and other products and services, we are working on the buildup and maintenance of nuclear power and other facilities with top priority given to safety. However, when natural disasters such as typhoons and heavy rains (extreme weather caused by climate change, etc.), earthquakes and tsunamis, as well as cyber attacks, facility accidents and other incidents interrupt the buildup or operation of the Group's facilities and the procurement of electricity and equipment from other companies, the Group's business performance may be affected.

In addition, with regard to nuclear power, we have a higher ratio of nuclear power generation than other electric power companies. This means that, for example, if the nuclear power utilization rate varies by 1%, power generation costs will fluctuate by 3.7 billion yen (based on fiscal 2019 results). If the shutdown of a power plant is prolonged due to compliance with new regulatory standards or lawsuit outcomes, the Group's business performance may be significantly affected by an increase in alternative thermal fuel costs and other factors.

Information management

The Group has worked to strengthen information security measures including our response to cyber attacks, establishing internal rules and providing training for employees. We implement strict management of customer information and all other important information that we handle in the course of our business. However, in the event of a problem such as an information leak, it may affect the Group's business performance.

8 Compliance

In October last year, we established a third-party committee consisting only of external members regarding the issue that some of our executives, etc. received cash and gifts from external sources. Said persons have fully cooperated with the investigation conducted by the Committee. On March 14, 2020, we received the results of the investigation report, followed by an order for business improvement based on the Electricity Business Act from the Ministry of Economy, Trade and Industry on March 29, 2020. Noting the serious nature of these charges, at the Management Reform Committee established on March 14, 2020, the Group compiled recurrence prevention measures and submitted a business improvement plan on March 30, 2020. We are swiftly implementing necessary measures, taking steps such as holding a general meeting of shareholders, etc. However, in the event of a failure in full realization of the required governance or allowing the re-occurrence of major non-compliance that undermines our social credibility, the Group's business performance may be affected.

Other: The Novel Coronavirus

The Group's business performance may be affected by the stagnation of economic activity resulting from the spread of the novel coronavirus and related fluctuations in total electricity sales, fluctuations in thermal fuel costs and purchased electricity fees due to trends in crude oil prices and other factors.

In addition, if the buildup or operation of the Group's facilities or procurement of electricity and equipment from other companies is interrupted, the Group's business performance may be affected.

• Growth investment management

Regarding investment in growth for the Group's domestic and international businesses, in addition to the investment appropriateness evaluations, we have established and operated a series of management processes including post-investment monitoring, as well as consideration and implementation of disinvestment/replanning measures. The internal committee (Growth Investment Committee), which consists of executives in charge of business promotion and corporate divisions, deliberates and examines such processes based on their specialized knowledge. In these ways, we support appropriate decision-making for individual projects and take timely measures when risks manifest to manage investment risks suitably. We regularly report these states of growth investment management to the Executive Meeting, and we reform frameworks and methods for evaluation and management as necessary.

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Investment appropriateness evaluations

When implementing investments, along with conformity to company-wide policies for investment goals and objectives, with the assurance of profitability as a prerequisite, we are evaluating the appropriateness of each project based on sufficiently examining risks and sustainability.

Monitoring

After making investments, we regularly conduct monitoring of individual projects to confirm their states of achieving investment objectives and profitability. We demand the implementation of necessary countermeasures when profitability decreases or other issues arise.

Investigations on disinvestment and replanning

For projects that have greatly worsened profitability or that have decreased retention value, based on comprehensive consideration of risks and other conditions, we promptly investigate and deliberate disinvestment and replanning, for example, as we strive to appropriately deal with risks.



Promoting compliance activities with the entire Group

In fiscal 2020, we set the following basic policies for promoting compliance: "Steady implementation of items described in the business improvement plan, and dissemination of items to be reviewed" and "Continuous promotion and support of autonomous compliance." In addition, we selected three priority themes as stated below for promoting compliance that the entire Group should be aware of. These themes address: "Breaking away from bad precedents," "Strict compliance with the Rules on Gifts, Reception and Entertainment" and "Promoting utilization of the Compliance Hotline." Based on these basic policies and priority themes, we will cultivate awareness of compliance across all Group employees.

 Results of questionnaire given to all employees on CSR (executed January 2020)



System **

In order to radically strengthen our system of observing laws and regulations, the Group has decided to rebuild its compliance system by utilizing external human resources, and this year we established a Compliance Committee as well as an Office of Compliance Promotion. Aiming to strengthen supervisory functions concerning compliance across the Group, the Compliance Committee is organized under the direct control of the Board of Directors and is independent from executive officers. The Committee, a majority of which including the Chairperson are external experts, deliberates and approves particularly important matters such as basic policies for promoting compliance and policies for addressing problematic events associated with directors, executive officers, and others. When necessary, the Committee also directly guides, advises and supervises the President and other executive officers, as well as reporting periodically to the Board of Directors. The Office of Compliance Promotion was newly established as a business organization independent from the Office of General Administration in order to strengthen its promotion functions related to compliance. The Office is composed of employees with legal knowledge as well as employees with diverse work experience. Besides formulating and implementing the Group's compliance promotion plan and responding to problematic events, the Office reports on and brings up compliance-related events for discussion to the Compliance Committee. Then, with the guidance, advice and supervision of the Compliance Committee, the President and other executive officers are able to act and take concrete measures.

In addition, an executive in charge of the Office of Compliance Promotion reports on the status of compliance promotion to the Compliance Committee Chairperson every month, and in return he/she receives guidance, advice and supervision.



Compliance System

**** Goals * ***

- Ensuring thorough compliance: Aiming for zero major social compliance violations. \rightarrow FY2019 result: 7 cases
- Promoting utilization of the Compliance Hotline: Number of consultations with the Compliance Hotline and number of major compliance violations among these.
 - → Number of consultations with the Compliance Hotline: 73 in fiscal 2018, 74 in fiscal 2019 (Number of consultations of major compliance violations in FY2019: 0 cases)

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• Promoting compliance in each company division and group company

By having each division and group company actively facilitate the functioning of PDCA cycles and promote compliance, we seek to have the idea that "compliance is a foundation of business" permeate and become established throughout the entire Group.

Specifically, each division has created their own "compliance promotion plans" and is striving to implement, evaluate and improve their promotion efforts. When doing so, they are considering the company's fundamental policies and major themes, the business and work characteristics of their divisions, and compliance risks that could occur in the future along with changes in the business environment, unacceptable incidents that occurred in the past both inside and outside the company, and other factors. Furthermore, considering our fundamental policies and major themes, each of our group companies is independently promoting compliance based on the characteristics and sizes of their businesses, as well as other real conditions.

• Supporting the efforts of each division and group company

In addition to leading the promotion efforts of the Group as a whole, our Office of Compliance Promotion is supporting the efforts of each division and group company. For example, through the Compliance Manual, the Office specifically explains 18 types of compliance guidelines formulated in accordance with laws, in-house rules, corporate ethics and other factors which all executives and employees of our Group must comply with or exercise caution about. In addition, with a focus on content related to major themes, the manual enhances educational discussion materials to contribute to the activities of every division and group company and also provides training related to compliance.

Global compliance efforts

Our Group will expand its business globally in Asia, North America, Europe and many other regions. Against this background, the Group considers it necessary to further ensure compliance by observing local ordinances and rules and meet social demands overseas as well. One of our compliance guidelines clearly stipulates "Compliance with international rules, and ordinances, etc. in the partners' countries." It keeps executives and employees of the Group informed that tightened bribery control is the global trend and that understanding and abundance of caution are required for risks posed by bribery when operating business globally.

Specifically, we will keep our minds on achieving thorough compliance as we continue striving to expand our businesses overseas. For example, we are clarifying matters to be observed strictly and prohibited acts, including exchanges of gifts and business entertainment conducted with improper intentions, by establishing in-house rules related to preventing the bribery of foreign official servants and others. We are also undertaking training, awareness-raising and other efforts with the theme of preventing foreign corruption in our divisions and group companies that conduct business overseas and other international transactions.

Compliance Hotline

Our Compliance Hotline is for consultations when people have doubts related to compliance about their workplaces or work tasks, including various legal violations and improper work conduct. This hotline is available not only to employees of our group companies but also to our contractors. This system enables us to collect a wider range of risk information. If required, a lawyer specializing in the field relevant to each issue will respond, and he/she can request the Compliance Committee or Audit Committee to take effective measures at his/her own discretion. We are working to create an improved environment offering a more approachable service that can accept anonymous consultations and that allocates female consultants, for example. The Hotline also provides compliance consultations to handle problems after investigating the facts, if necessary. No major violations have been confirmed from consultations with the Compliance Hotline. Yet, we are working to enhance and accelerate the use of our whistleblowing system, which is a goal we set in our fiscal 2020 compliance promotion plan.





Kansai Electric Power Group Compliance Hotline

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
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As part of the efforts of its business improvement plan, the Group established a Compliance Committee and held meetings this year in order to reinforce the compliance supervision functions of the Group toward "reconstructing the compliance system utilizing external human resources." Under the guidance, advice and supervision of the Compliance Committee, and with a focus on "breaking away from bad precedents," we are promoting autonomous compliance in each division and workplace by steadily implementing the compliance promotion plan, which is formulated as follows.

• Compliance Committee meetings held (as of the end of August)

- Agenda at the Meeting on May 18, 2020 Future efforts and approaches for strengthening the compliance system as well as fostering and thoroughly promoting awareness; direction for reviewing basic policies to promote compliance, and other matters
- Agenda at the Meeting on June 12, 2020 Status and progress report of the business improvement plan, direction for reviewing basic policies, etc. to promote compliance, and other matters
- Agenda at the Meeting on August 17, 2020 Regarding the investigation report on executives' compensation for part-time engagements, etc. following retirement



• Compliance Promotion Plan for 2020

1. Comprehensive review and dissemination of basic policies related to compliance promotion

In order to foster awareness of compliance from the "user's perspective," we will comprehensively review our basic policies and internal rules related to compliance promotion in line with the guidance, advice and supervision provided by the Compliance Committee. We will also review and verify the Rules on Gifts, Reception and Entertainment instituted in December 2019 to make them even more effective. Additionally, in order to disseminate basic policies as well as the Rules on Gifts, Reception and Entertainment throughout the Group, we will launch awareness-raising activities through messages, disseminating information through in-house newsletters, etc., as well as taking advantage of training opportunities.

2. Enhancement and promotion of the whistleblowing system

• Establishing reporting rules for executives and employees in the case of a problematic event Our internal rules clearly state that, when a problematic event occurs, the business location in which the problem occurred shall immediately report to the Office of Compliance Promotion, and the Office shall deal with said event from the perspective of social norms, etc., and report to the Compliance Committee to receive guidance, advice and supervision.

• Enhancement of whistleblowing and consultation systems Regarding whistleblowing and consultation from executives, employees and external parties, the Compliance Hotline shall respond as appropriate. Additionally, we have established a framework under which, if necessary, a lawyer specializing in the field relevant to each issue will respond and he/she can request the Compliance Committee or Audit Committee to take effective measures at his/her own discretion. Moving forward, we will purposefully inform our executives and employees of these reporting rules to ensure their reporting of problematic events based on the whistleblowing system, as well as encouraging them to utilize the Compliance Hotline.

3. Implementation of training related to compliance, etc.

Looking toward the renewal of corporate management, we will strengthen training for executives to firstly improve themselves and adhere to an exceptionally high-level code of conduct. Specifically, opportunities for regular discussions with external experts will be periodically provided on a rough quarterly basis, and we will develop a dedicated curriculum on compliance designed for the post they are scheduled to assume. At the same time, we will further strengthen the existing training system for employees. Going forward, we will consider and implement training for compliance promotion staff as well as new training programs with referenced to those for public servants. Through these activities, we will strive to continuously raise compliance awareness across the Group.

4. Initiatives of each division and group company

As stated in the aforementioned section - Promoting compliance in each company division and group company - we will continue with our ongoing efforts.

5. Support for each division / group company by the Compliance Secretariat

As stated in the aforementioned section - Supporting the efforts of each division and group company - we will continue with our ongoing efforts. The Group will continue to foster an organizational culture that emphasizes compliance. We are fully committed to regain the trust of society through our prompt and steady implementation of measures to enhance compliance.

Sustainability for the Kansai Electric Power Group	Environment	Social	Governance
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• Responding to compliance violations

Based on our business improvement plan formulated last year, we have established a reporting system when a problematic event occurs, and we have stipulated the reporting rules for executives and employees in our internal rules. In the relevant divisions, should respective division heads become aware of any information on major violations of laws and regulations (including omission of procedures stipulated by laws and regulations) or fraud and other compliance-related issues that affect the Company's credibility with the external stakeholders, they shall immediately report these matters to the General Manager of the Office of Compliance Promotion. The General Manager of the Office shall take appropriate measures and report on these matters to the Compliance Committee to receive guidance, advice and supervision. When executives become aware of an event that causes or is likely to cause a compliance issue, they shall report it to the outside members of the Compliance Committee and the Chairperson of the Board of Directors. In the same situation, employees shall report to their superiors. If it is judged appropriate based on the details of the report, employees can report to the Compliance Hotline set up inside and outside the Company, instead of reporting to their superiors. When a report is received, the Hotline shall investigate and take action in cooperation with relevant divisions and related parties as necessary. If the investigation reveals a violation of laws and regulations, the relevant divisions and related parties shall promptly take corrective and preventive measures, and if necessary, report to the relevant administrative agency and announce the issue to the news media.

The Compliance Hotline shall also follow up with related divisions and related parties as necessary, and check whether or not the corrective and recurrence prevention measures are functioning sufficiently, as well as checking if any compliance issue has reoccurred. If a compliance issue has reoccurred, the Hotline can be used to discuss necessary measures with relevant divisions as well as other related divisions.

• Sanctions for corruption such as bribery

We have established internal rules concerning the handling of gifts and entertainment and the prevention of bribery of foreign public officials, etc. as well as implementing thorough measures to prevent corruption, including bribery. In case of a compliance issue, we have a system in place for immediate reporting to the Office of Compliance Promotion and the Compliance Hotline.

In fiscal 2019, there were no cases in which the Company was held liable for sanctions, such as legal measures, fines and surcharges, based on any form of corruption including bribery.

Regarding compliance-related risk assessment

Each year the Kansai Electric Power Group assesses compliance-related risks, including anti-corruption, and selects compliance risk items to be addressed. We formulate and implement concrete preventive measures against these risks.

Information security measures

Policy and Concept

Amid rising awareness of personal information and accelerating data utilization with the progress of digitization, the Personal Information Protection Law imposes more stringent obligations on business operators that handle personal information.

The Group believes that the proper protection of personal information is an important responsibility in order to earn the trust of customers and many other people in society, as well as to fulfill our mission as an enterprise. Fully recognizing the importance of personal information the Company and group companies obtain from our customers, etc. that we must handle carefully under principles of respect for the individual, we deal with personal information appropriately in consideration of rights as the right to privacy, in compliance with the Personal Information Protection Law and other guidelines.

With regard to information security - including proper handling of business and personal information – measures on an organizational, personnel, physical and technical level have been implemented. We seek to improve on these measures by incorporating internal and external events as well as reviewing the latest technology and knowledge as appropriate.

System **

Director responsible: Toyokazu Misono [CISO (Representative Executive Officer, Vice President)] Deliberative body: Executive Meeting Management office: Cyber Security Administration Group, Office of IT Strategy

(Information Security Management Office)

Efforts **

The Group works to enhance information security. Our efforts include strengthening physical and technical measures such as entry/exit controls and access controls for information systems. Organizational and personnel measures such as reviewing internal rules, training employees, and training to defend against targeted email attacks are also ongoing.



	Sustainability	y for the	Kansai	Electric	Power	Group
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Environment

Kansai Electric Power Group

Kansai Electric Power Co., Inc.

Social

Kansai Transmission and Distribution, Inc.

Relevant data

Policies		
Compliance Guidelines	Established	Compliance Guidelines https://www.kepco.co.jp/sustainability/csr/principle/pdf/compliance_guidelines.pdf
Ethical Code	Established	Included in the Kansai Electric Power Group CSR Action Charter https://www.kepco.co.jp/sustainability/csr/mind/charter/index.html
Anti-Corruption Guidelines	Established	Included in the Kansai Electric Power Group CSR Action Charter https://www.kepco.co.jp/sustainability/csr/principle/pdf/compliance_guidelines.pdf
Anti-Bribery Guidelines	Established	Included in the Kansai Electric Power Group CSR Action Charter https://www.kepco.co.jp/sustainability/csr/principle/pdf/compliance_guidelines.pdf
Rules on Gifts, Reception and Entertainment	Established	-
Whistleblower Protection Policy	Established	_
Privacy Policy	Established	Privacy Policy https://www.kepco.co.jp/siteinfo/privacy/
Information Security Guidelines	Established	_

	2018/3	2019/3	2020/3
Awareness of compliance (internal questionnaire)	95.3%	95.8%	96.9%
Number of cases handled by the Compliance Hotline	67	73	74
Number of major compliance violations among these	0	0	0
Major social compliance violations	2	3	7
Number of information security training participants	18846	17404	17979
Major information security incidents	1	1	2



We wish to be a source of power for our customers and communities by serving them with sincerity and passion.