



# 2020

J-POWER Group  
Integrated Report

### Our mission

We will meet people's needs for energy without fail, and play our part for the sustainable development of Japan and the rest of the world.

### Our Credo

We value integrity and pride, which drive everything we do.  
We pursue harmony with the environment, and thrive in the trust of communities where we live and work.  
We regard profits as the source of our growth, and share the fruits with the society.  
We refine our knowledge constantly, to be the pioneering leader in technologies and wisdom.  
We unite diverse personalities and passions as one, and dare create a better tomorrow.

#### ▼ Third-Party Certifications



#### ▼ Contribution to the Sustainable Developing Goals (SDGs)



(→ p. 18 The J-POWER Group's Value Creation Process)

#### ▼ Inclusion in Indices

J-POWER is included in the following indices as of June 2020.

FTSE4Good Index Series

FTSE Blossom Japan Index



#### ▼ Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD)



(→ p. 12 Special Feature: Climate Change Scenario Analysis)

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### Editorial Policy

From fiscal 2019, the J-POWER Group has published the *Integrated Report*, which presents both financial and non-financial data in a structured and consistent manner. This report is divided into three broad sections: Business Strategy, Environment/Social/Governance, and Financial Section/Fact Data. The Business Strategy section describes J-POWER's medium- to long-term direction as well as its initiatives and value creation methods aimed at growth in addition to laying out the links between J-POWER's business activities and social issues. The Environment/Social/Governance section focuses on key points regarding the Group's main ESG initiatives underlying value creation in a clear, reader-friendly manner.

In preparing the *Integrated Report*, we referenced such guidelines as the Global Reporting Initiative's GRI Standards, Ministry of Economy, Trade and Industry's the Guidance for Collaborative Value Creation, and the International Integrated Reporting Council's International Integrated Reporting Framework. Going forward, we will continue to enhance the report's content to foster deeper understanding of the Company among our shareholders, investors, and other stakeholders.

Reporting Period	April 1, 2019 to March 31, 2020 (also contains reporting on material matters after this period)
Reporting Cycle	One year
Publication of Previous Report	August 31, 2019
Guidelines Referenced	<ul style="list-style-type: none"> <li>• GRI Standards (Global Reporting Initiative)</li> <li>• International Integrated Reporting Framework (International Integrated Reporting Council)</li> <li>• Guidance for Collaborative Value Creation (Ministry of Economy, Trade and Industry)</li> </ul>
Forward-Looking Statements	Statements in this integrated report, other than those of historical fact, are forward-looking statements about the future performance of the J-POWER Group that are based on management's assumptions and beliefs in light of information currently available, and involve both known and unknown risks and other uncertainties. Actual events and results may differ materially from those anticipated in these statements.
Presentation of Monetary Amounts and Other Figures	For monetary amounts and electric power sales volumes, figures less than the indicated unit are rounded down. For other amounts, figures less than the indicated unit are rounded to the nearest unit unless otherwise mentioned.



# The J-POWER Group's History

Since its establishment by the government in 1952 to overcome the power shortages in postwar Japan, the J-POWER Group has developed its business in the wholesale supply of hydroelectric and thermal power, conducted a power transmission business through its trunk transmission lines that connect each domestic region, and contributed to the stable supply of electric power in Japan.

Based on its Corporate Philosophy, the J-POWER Group develops power sources in line with evolving needs while minimizing environmental impact.

Since 2000, we have growing the overseas business and entered renewable energy development, expanding our fields of business.

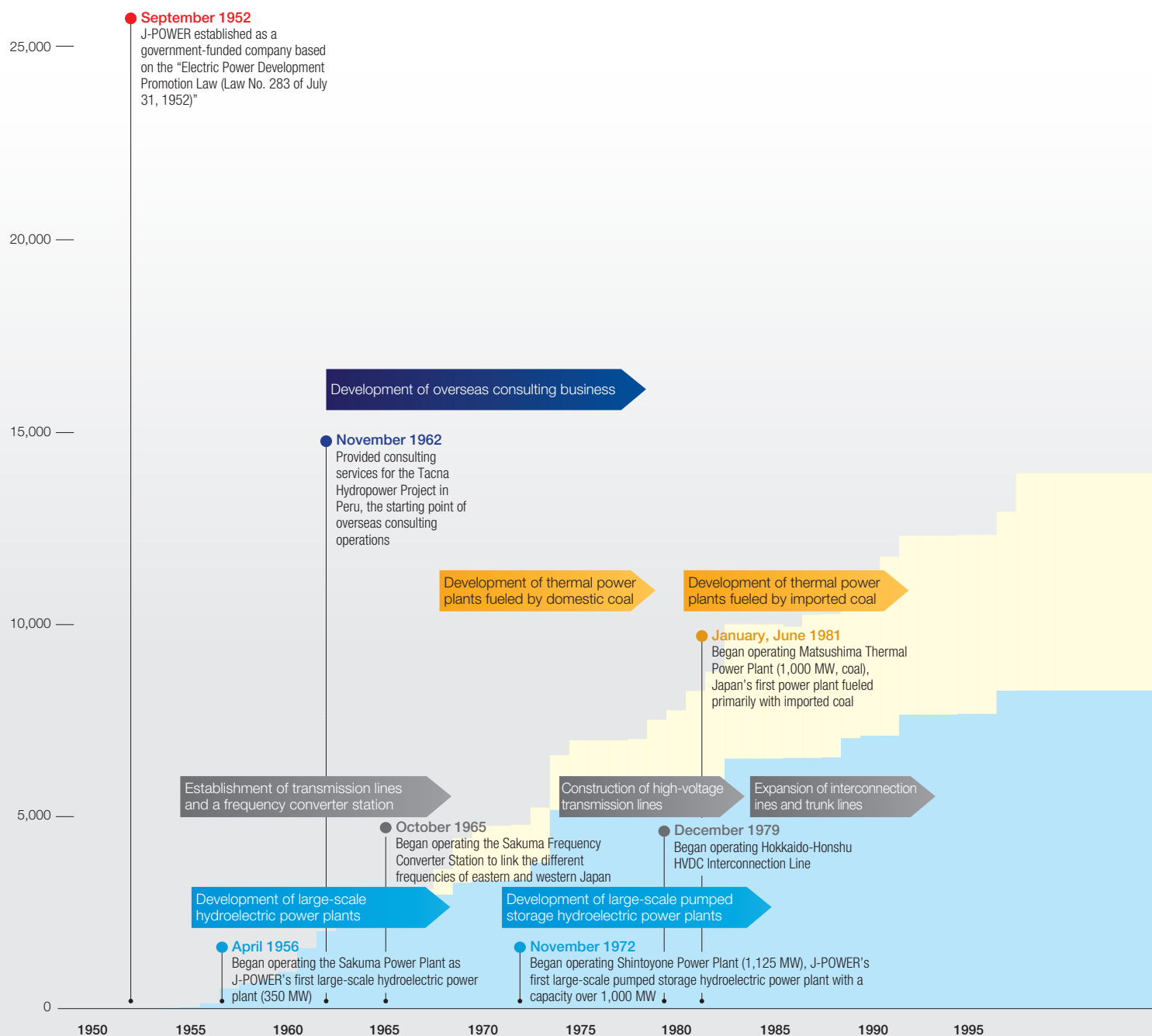
## Evolving Needs

Overcoming post-war power shortages

Diversifying power sources after the oil shocks

## Power Generation Capacity

(MW)

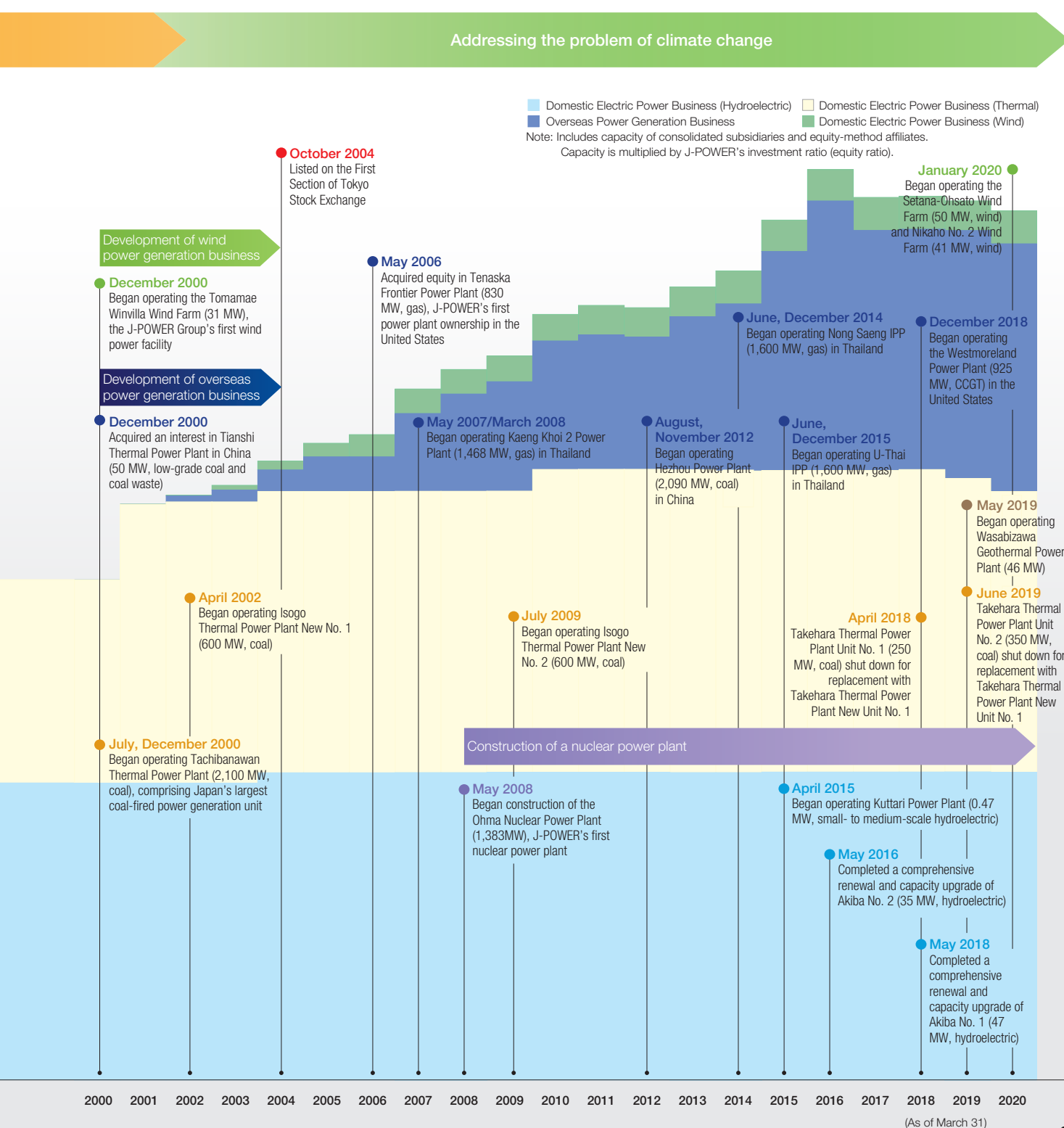




Listed on the Tokyo Stock Exchange's First Section and thus becoming fully privatized in 2004, the J-POWER Group has been expanding its fields of business, including in electric power generation businesses in foreign countries where growth is expected and renewable energy, such as wind and geothermal power.

Over the decades, the J-POWER Group has contributed to the solution of a variety of energy-related challenges through its businesses, adapting to changes in the world while expanding its businesses and continuing to grow.

Leveraging the technologies and track record it has amassed in Japan and around the world, the J-POWER Group aims for sustainable growth based on the concept of "coexistence of energy and the environment."



## Message from President Toshifumi Watanabe



By working toward a CO<sub>2</sub>-free power source portfolio, the J-POWER Group will achieve further growth while contributing to the solution of climate change and sustainable global development

With the global spread of COVID-19, 2020 got off to a rocky start. It is still impossible to make any solid forecasts regarding the abatement of the pandemic or the recovery of flagging economies around the world. Although there is no getting around the great sense of uncertainty in the business environment, energy supply, our area of business, is as important as ever. An uninterrupted and stable supply of environmentally friendly, low-cost energy is especially important in maintaining social stability during this time of crisis and in supporting economic recovery going forward.

In terms of energy supply and demand over the medium term, we are facing a need for concrete, effective action to address diverse challenges. Robust growth in energy demand is expected, particularly in emerging countries, even as we are being called upon to contribute to the achievement of the United Nations Sustainable Development Goals (SDGs) and the long-term targets of the Paris Agreement. In addition, technological advances, including digital transformation, are creating possibilities for far-reaching socio-economic change by the mid-21st century.

In this time of transition, we strongly feel it is our mission to meet growing needs related to both energy supply and climate change and to provide a constant, stable supply of power to support society and the economy as it grows in sophistication and transforms.

2020 marks the halfway point of the J-POWER-Group's Medium-Term Management Plan launched in 2015. Also in 2020, we have published our vision for the period leading up to 2050, the year specified for the achievement of the long-term targets of the Paris Agreement, as well as key initiatives going forward. To achieve zero-emission power supply, we are further expanding the use of renewable energy, advancing the Ohma Nuclear Power Plant project, working to commercialize integrated coal gasification combined cycle (IGCC) technology, and developing CO<sub>2</sub> separation, capture, utilization, and storage (CCUS) technologies. By rolling out zero-emission technologies globally, we aim to provide stable power supply and help solve climate change worldwide.

2030, the year targeted by the SDGs, and 2050, the year targeted by the Paris Agreement, are not so far in the future. While handling the issues before us, including the COVID-19 pandemic and natural disasters, we will look for opportunities in the changing business environment and contribute to the sustainable development of Japan through ongoing, proactive business development.

Representative Director  
President and  
Chief Executive Officer  
August 2020

A handwritten signature in black ink, reading 'T. Watanabe'.



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# Business Strategy



# The President Discusses the J-POWER Group's Business Strategies

## The Medium-Term Management Plan and Initiatives in Fiscal 2019

Since formulating the Medium-Term Management Plan in 2015, the J-POWER Group has steadily begun operations at new development projects, achieving gradual growth. Such projects include four wind power facilities, including the Ohma Wind Farm, the Wasabizawa Geothermal Power Plant, Takehara Thermal Power Plant New Unit No. 1, and Kashima Power in Japan, as

well as U-Thai IPP in Thailand and the Westmoreland Power Plant in the United States. Furthermore, we have advanced initiatives aimed at further growth going forward, such as surveys for new development and demonstration trials of oxygen-blown integrated coal gasification combined cycle (IGCC) with CO<sub>2</sub> separation and capture.

### Medium-Term Management Plan (Formulated in 2015)

	Indicator	Target
Growth	J-POWER EBITDA*	Increase to around <b>1.5x</b> the level of FY2014 in <b>FY2025</b> (FY2014 result: ¥181.8 billion)
Soundness	$\frac{\text{Interest-bearing debt}}{\text{J-POWER EBITDA}}$	Improve from level at end of FY2014 by <b>end of FY2025</b> (End of FY2014 result: <b>9.5x</b> )

\* J-POWER EBITDA= Operating income + Depreciation and amortization + Equity in earnings of affiliates

### Main Projects That Have Begun Operations and Other Initiatives since the Launch of the Medium-Term Management Plan<sup>1</sup>

	2015	2016	2017	2018	2019	2020	(FY)
Renewable energy		Ohma Wind Farm (20 MW) Yurihonjo Wind Farm (16 MW)				Setana-Osato Wind Farm (50 MW) Nikaho No. 2 Wind Farm (41 MW) Kuzumaki No. 2 Wind Farm (45 MW) Wasabizawa Geothermal Power Plant (46 MW)	
Thermal power						Takehara Thermal Power Plant New Unit No. 1 (600 MW) Kashima Power (645 MW)	
New technology development						Development of IGCC/IGFC with CO <sub>2</sub> separation and capture (demonstration tests at Osaki CoolGen)	
Overseas		U-Thai IPP (1,600 MW)				Westmoreland Power Plant (925 MW) Central Java IPP (2,000 MW)	
Three-Year Forecast		Three-year forecast (FY2015–2017) Growth indicator: Average ¥185.0 billion /year Soundness indicator: Maintain at 9.5x Result (2018 review) Growth indicator: Average ¥186.7 billion /year Soundness indicator: 8.0x (end of FY2017)			Three-year forecast (FY2018–2020) Growth indicator: ≥¥210.0 billion (FY2020) Soundness indicator: Maintain at 8.0x Forecast <sup>2</sup> Growth indicator: ¥195.0 billion (FY2020) Soundness indicator: 8.8x		

1. Figures for generation capacity are those for the respective facilities, not on an owned capacity basis.

2. Forecast based on the consolidated earnings forecasts for the year ending March 31, 2021 provided in "Financial Results (Unaudited) (for the Year Ended March 31, 2020)" (published April 30, 2020)

### Main Initiatives in FY2019

	Date	Initiative	Remarks
Onshore wind power	June 2019	Began construction on the Kaminokuni No. 2 Wind Farm	Generation capacity: 42 MW Scheduled to start operations in September 2021
	January 2020	Began operation of the Setana-Osato Wind Farm	Generation capacity: 50 MW
	January 2020	Began operation of the Nikaho No. 2 Wind Farm	Generation capacity: 41 MW
Offshore wind power	July 2019	Began development survey of Saikai offshore wind power generation project	
	August 2019	Began development survey of Hiyama area offshore wind power generation project	
	November 2019	Began development survey of Fukui Prefecture Awara offshore wind power generation project	
Hydroelectric	April 2019	Began construction on the Ashoro Repowering project	Generation capacity: 40 MW Scheduled for completion in FY2022
	April 2019	Began construction on the Shinkatsurazawa hydroelectric plant	Scheduled to start operations in FY2022
Geothermal	April 2019	Began construction on the replacement of Onikobe Geothermal Power Plant	Generation capacity: 14.9 MW Scheduled to start operations in April 2023
	May 2019	Began operation of the Wasabizawa Geothermal Power Plant	Generation capacity: 46 MW
	July 2019	Began resource surveys at Takahinatayama site in Miyagi Prefecture	
	August 2019	Began construction on the Appi Geothermal Power Plant	Generation capacity: 14.9 MW Scheduled to start operations in April 2024
Overseas	June 2019	Began construction on the Jackson Power Plant in the United States	Generation capacity: 1,200 MW Scheduled to start operations in April 2022
	September 2019	Signed memorandum of understanding regarding a strategic alliance with Malakoff Corporation Berhad in Malaysia	
	March 2020	Began large-scale solar photovoltaic project in Texas in partnership with AP Solar	Generation capacity: 350 MW (AC) Scheduled to start operations in 2022



## The J-POWER Group's Long-Term Direction and Key Initiatives

For the energy industry, the period leading up to 2050 represents a time of major transition driven by efforts to respond to climate change, growing energy demand in emerging countries, and technological innovation, including the advance of digital transformation. Within J-POWER, we have had deep discussions regarding our corporate direction over the long term and key initiatives to focus on in this period of transition in light of scenarios for 2050 created by the IEA<sup>1</sup> and other research institutions in and outside Japan.

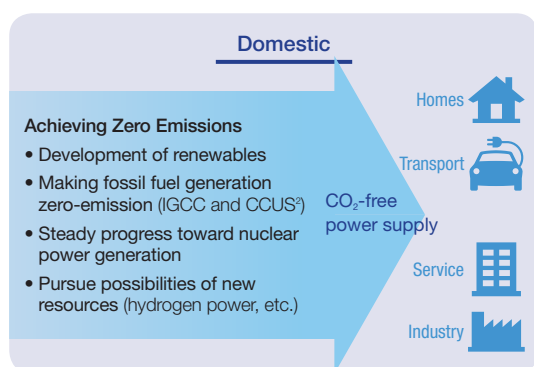
As for the domestic business environment in 2050, final energy consumption is expected to have decreased due to population decline and efforts to address climate change, but electricity demand is expected to have remained flat or even increased slightly. This is because the direct use of fossil fuels in homes, transportation, and industry is expected to be replaced by the use of CO<sub>2</sub>-free electricity. Japan will not be able to fully meet electricity demand with renewables and nuclear power, so it will need to utilize a good balance of diverse power sources that includes fossil fuel power, such as coal-fired and gas-fired thermal power. Given this, to contribute to the achievement of Japan's greenhouse gas

reduction targets, achieving zero emissions of CO<sub>2</sub> from all power sources will be essential.

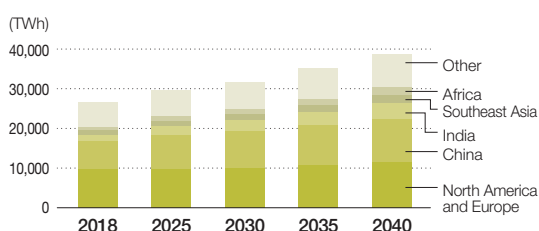
The J-POWER Group is contributing to the stable supply of power in Japan and addressing climate change not only by promoting renewable energy and nuclear power, but by working to achieve a CO<sub>2</sub>-free power supply using a wide range of approaches, such as commercializing combinations of renewables with batteries and of thermal power sources with CCUS<sup>2</sup> technology, as well as pursuing the possibilities of hydrogen power and other new resources.

Just as in Japan, there are growing needs for CO<sub>2</sub>-free power supply overseas. At the same time, in emerging countries, electricity consumption is expected to see major expansion due to population and economic growth. Aiming to both contribute to economic development and the fight against climate change, the J-POWER Group is exploring the potential of diverse power sources in line with specific conditions in the countries in which it operates.

Based on this long-term direction, we have designated six key initiatives to focus on going forward.



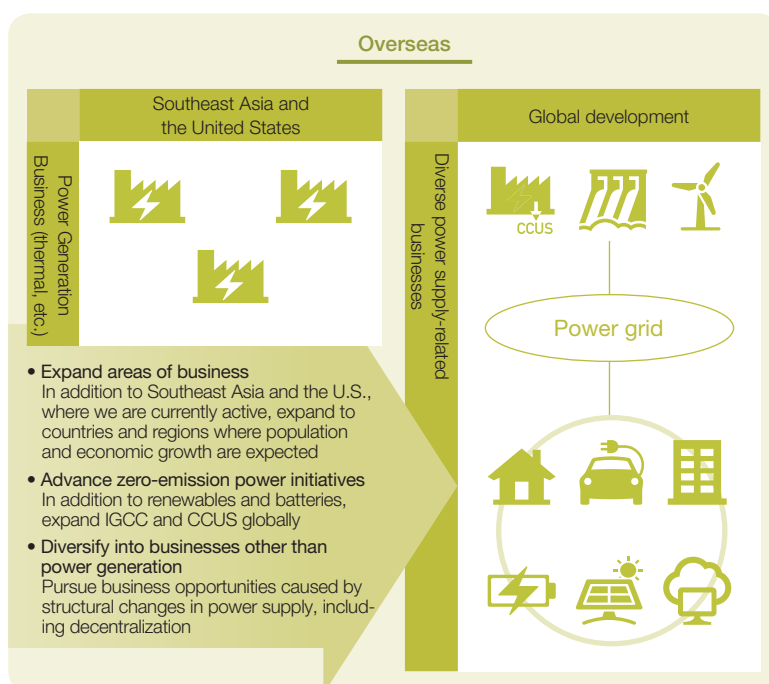
Electric Power Generation Forecast<sup>3</sup>



1. International Energy Agency

2. CCUS: CO<sub>2</sub> capture, utilization and storage

3. Sustainable Development Scenario in the IEA's "World Energy Outlook 2019"





## The President Discusses the J-POWER Group's Business Strategies

### Current business environment

- Needs for action that addresses climate change challenges
- Japan: Deregulation of power market and intensifying competition, needs for stable power supply and resilience
- Overseas: Needs for measures that simultaneously address increasing energy demand and climate change
- Developing the business environment to support distributed power system dissemination

### Direction of initiatives

- Realize zero-emission power supply
- Further expand globally
- Develop new businesses taking advantage of business environment changes
- Strengthen the business foundation to support the above initiatives

### Key initiatives

1. Further expansion of renewable energy
2. Zero emissions from fossil fuel power generation
3. Promotion of the Ohma Nuclear Power Plant Project, with safety as a major prerequisite
4. Exploring new fields in overseas business
5. Initiatives for distributed energy service
6. Strengthening the profit base, financial discipline, and human resource strategy

### Further Expansion of Renewable Energy

As a leader in renewable energy boasting the second-highest generation capacity in Japan in terms of both hydroelectric and wind power, the J-POWER Group is reinforcing and accelerating initiatives to achieve its target for fiscal 2025 of approximately 1 GW in new renewable energy development.

In onshore wind power generation, our track record of development, maintenance, and operation extends more than 20 years. As of March 31, 2020, we have two projects under construction and 11 in preparation for construction or for development. Going forward, we will continue to work toward scale expansion through the development of new sites and replace facilities at existing sites with larger turbines.

In domestic offshore wind power generation, we are preparing for development in port areas specified by the city of Kita-Kyushu and advancing development surveys of three general sea areas. Overseas, we are taking part in a development project in the United Kingdom, where many offshore wind farms have already been developed, accumulating expertise related to construction, maintenance, and operations. Using the expertise gained from this project, we aim to secure large-scale development projects in general sea areas of Japan, which are expected to expand going forward.

### Zero Emissions from Fossil Fuel Power Generation

Since the start of 2020, the Japanese government has begun discussions about shutting down inefficient coal-fired thermal power facilities. Because Japan has few energy resources, from an energy security perspective, a certain amount of coal-fired thermal power is necessary. As such, technological development aimed at achieving zero emissions from fossil fuel power will only grow in importance going forward.

To achieve zero emissions from fossil fuel power, the J-POWER Group is currently implementing demonstration tests of oxygen-blown integrated coal gasification combined cycle (IGCC) with CO<sub>2</sub> separation and capture at Osaki CoolGen. We are also advancing other diverse initiatives to this end, for example, putting CO<sub>2</sub> to effective use (carbon recycling) and leveraging gasification technologies to utilize hydrogen.

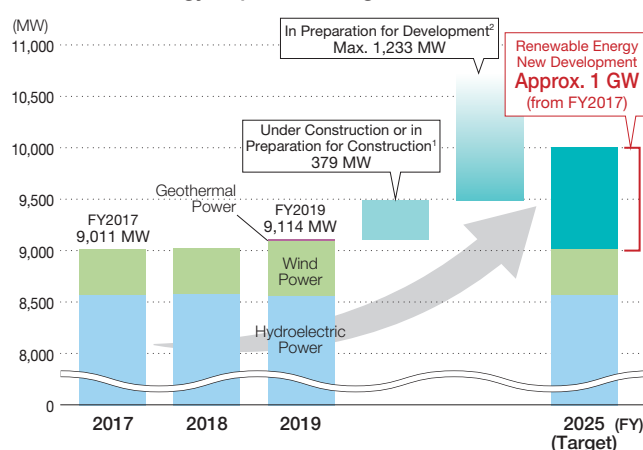
Of note, we aim to commercialize oxygen-blown IGCC in the latter half of the 2020s.

Note: For more details about IGCC, CCUS, and hydrogen, please refer to pp. 26–29.

We are also steadily advancing construction and development of geothermal and hydroelectric projects, working to further expand our business scale and reinforce our foundations in renewable energy.

Note: For details about the further expansion of renewable energy, please refer to pp. 22–25.

### Renewable Energy Expansion Target



Note: Owned capacity basis  
 1. Includes overseas development projects.  
 2. Excludes Phase II of Kaminokuni No. 2. Includes projects in preparation for development as of June 2020.



Osaki CoolGen demonstration tests (Phase 2: 2019–2020)

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

For Japan, with its few energy resources, nuclear power generation is an essential baseload power source from the perspective of ensuring a stable energy supply. At the same time, it is also a CO<sub>2</sub>-free power source.

Because the Ohma Nuclear Power Plant will use entirely uranium-plutonium mixed oxide (MOX) for fuel, it will play a central role in the nuclear fuel cycle, thereby contributing to Japan's energy security.

The Ohma Nuclear Power Plant is currently under construction and undergoing a review of compliance with the New Safety Standard for Nuclear Power Stations by the Nuclear Regulation Authority. We are appropriately responding to this review and constantly working to further improve safety as we steadily

advance the Ohma Nuclear Power Plant Project toward the start of operations.



The Ohma Nuclear Power Plant under construction (June 2020)

## Exploring New Fields in Overseas Business

The J-POWER Group entered the overseas power generation business in earnest in 2000. Since then, we have expanded business scale and revenue through the new development of thermal power based on long-term PPAs,\* mainly in Southeast Asia and the United States. Currently, we are advancing construction of the Central Java Project in Indonesia, the Triton Knoll Offshore Wind Farm in the United Kingdom, and the Jackson Power Plant in the United States. In addition, in March 2020, we began development of our first solar photovoltaic project in the United States.

Going forward, in addition to steadily advancing these projects, we aim for new business development that leverages changes in business environments overseas.

In addition to Southeast Asia and the United States, where we already have established business platforms, we are aiming to

expand into countries and regions where future population and economic growth is expected. In terms of business fields, until now we have focused mainly on thermal power development. However, we aim to reinforce initiatives related to zero-emission power sources, participating and taking on risk from the early stages of new development of wind, solar, and other renewables to secure revenue. In the business of power generation based on conventional large-scale power plants as well, we will expand business opportunities in line with each country's circumstances and business environment.

As we work to expand our fields of activity, we will aim for revenue expansion and further growth in the overseas power generation business.

\* PPA: Power purchase agreement. A power sale agreement that specifies in advance the terms of power purchasing, including price and period.

### Business Environment Changes

- Thermal power development projects with long-term PPAs are decreasing
- Development needs are diversifying by country and region
- Electric power business structures are changing in countries where deregulation and the introduction of renewables are advancing

### Future Business

- New development of renewables
  - Take on risk to participate from early development stages
  - Aim to expand chances to acquire projects and secure profitability commensurate with risks
- Expand business opportunities in line with each country's circumstances and business environment

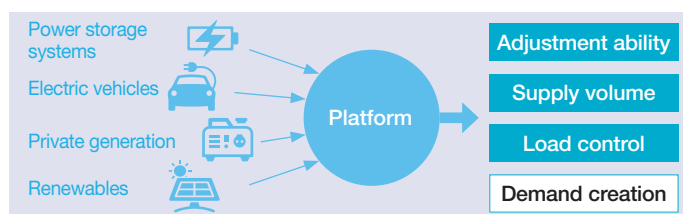
## Initiatives for Distributed Energy Service

Since fiscal 2018, J-POWER has taken part in the electric power retailing business in partnership with ENERES Co., Ltd., Suzuyo Shoji Co., Ltd., and other companies. Building on these efforts, we are pursuing business opportunities aimed at the popularization and expansion of distributed energy services focused mainly

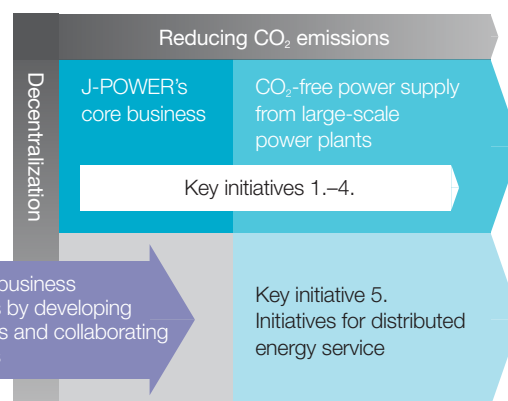
on solar and other renewables. As part of such efforts, we are already taking part in the VPP construction business. In addition, by combining our technologies with those of startups, we are approaching distributed services from business areas outside of energy services.

### Current Efforts

- Entering power retailing business in cooperation with partners
- Creating new value (in cooperation with partners)
  - Supply green power that meets the RE100 Project\* requirements
  - Virtual power plant (VPP) business
  - Utilize adjustment abilities of customer's resources (batteries, pumps, etc.)
  - Construct distributed energy integrated control platform



### Long-Term Direction



\* An environmental initiative aimed at covering 100% of energy business operation energy needs with renewable energy

## The President Discusses the J-POWER Group's Business Strategies

### Strengthening the Profit Base, Financial Discipline, and Human Resource Strategy

From fiscal 2020, we have begun to build a new maintenance system for thermal power plants. Until now, J-POWER and a maintenance subsidiary cooperatively operated and maintained these power plants. By comprehensively consigning these operations to the maintenance subsidiary, we are eliminating redundant management structures. Furthermore, we aim to reduce costs and save labor by using digital technologies and other improvements. We plan to reduce operation and maintenance staff by approximately 30% by fiscal 2024, reassigning redundant employees to renewables and overseas businesses, areas of focus going forward.

Looking at electricity sales, until now, our approach has mainly centered on long-term PPAs. Going forward, we will use these in combination with short-term PPAs and electric power retailing in cooperation with partners to diversify our sales methods and thereby maximize and stabilize revenue.

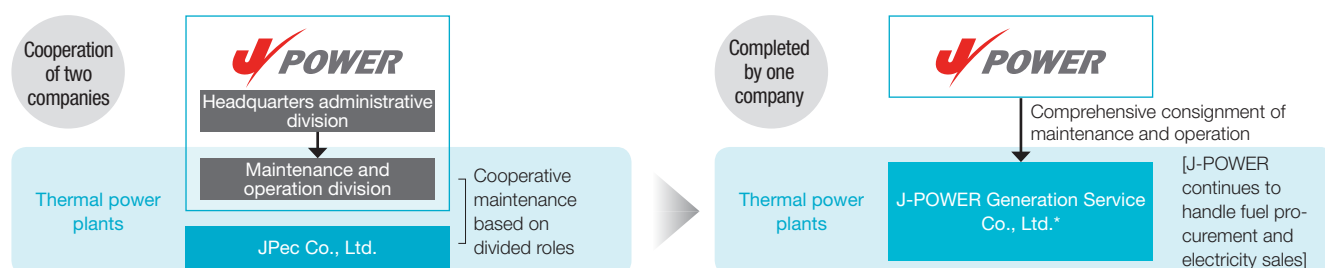
In terms of human resource strategy, we are working to realize diverse work styles in line with employees' life plans and are promoting health and productivity management. Furthermore, we are implementing initiatives supporting the professional participation of diverse human resources, including issuing open calls for work experience participants at startups.

Strengthening the Profit Base	<p><b>Steadily advance projects under construction</b></p> <ul style="list-style-type: none"> <li>Japan: Takehara Thermal Power Plant New Unit No. 1 (began operation in June 2020), Kashima Power (began operation in July 2020)</li> <li>Overseas<sup>1</sup>: Central Java IPP (Indonesia; scheduled to start operations in FY2020), Jackson Power Plant (U.S.; scheduled to start operations in FY2022)</li> </ul> <p><b>Improve maintenance of power generation facilities</b></p> <ul style="list-style-type: none"> <li>Unify the maintenance and operation of thermal power plants under the existing thermal power maintenance subsidiary (operations completed by one company)</li> <li>Transfer the maintenance and operation of wind farms to the hydroelectric, transmission and transformation maintenance subsidiary in FY2020 (enhanced system responding to expansion)</li> </ul> <p><b>Diversify electricity sales</b></p> <ul style="list-style-type: none"> <li>Maximize and stabilize revenue through diverse sales channels combining long-term PPAs with short-term PPAs and retail business</li> </ul> <p><b>Enhance reliability of transmission and transformation facilities, maintain wide area network</b></p> <ul style="list-style-type: none"> <li>Secure stable revenue by enhancing resilience, managing aging facilities, and installing the New Sakuma Frequency Converter Station</li> </ul> <p><b>Strengthen the hydroelectric profit base</b></p> <ul style="list-style-type: none"> <li>Improve reliability by taking measures to counter facility aging and promote initiatives to enhance competitiveness</li> </ul>
Financial Discipline	<p><b>Financial soundness</b></p> <ul style="list-style-type: none"> <li>Utilize interest-bearing debt within the range where the ratio to cash flows (J-POWER EBITDA) improves from the level at the end of FY2014 (9.5x)</li> </ul> <p><b>Investment projects</b></p> <ul style="list-style-type: none"> <li>Conduct reviews, including screening based on hurdle rates, when making investment decisions and regularly monitor projects</li> </ul>
Human Resource Strategy	<p><b>Promote the active participation of diverse human resources (diverse personalities, generations, values, etc.)</b></p> <ul style="list-style-type: none"> <li>Acquire and cultivate human resources with the abilities and individuality to contribute to business expansion in Japan and overseas and put them into growing fields</li> <li>Issue open calls to support voluntary learning (work experience at startups, Job Frontier System<sup>2</sup>)</li> <li>Realize diverse work styles (flexible working hours, promote the use of childcare/nursing care leave and working from home)</li> <li>Develop safe work environments (utilizing IT tools, advanced risk assessment)</li> <li>Promote health and productivity management (collaborating with the health insurance association, certified as a Health &amp; Productivity Management Outstanding Organization)</li> </ul>

1. The impact of the COVID-19 pandemic on these projects is currently under review

2. A system in which employees work in business areas that they are interested in on a short-term, trial basis to promote their understanding of work in such areas and provide opportunities to think about and deepen their understanding and consideration of their career paths

### New Thermal Power Plant Operation and Maintenance System



\* JPec Co., Ltd. was renamed J-POWER Generation Service Co., Ltd. on August 1, 2020.

### Diversifying Electricity Sales



## J-POWER's Support for the Paris Agreement and Initiatives to Address Climate Change

The importance of addressing climate change is growing every year. As such, we believe that it is necessary to disclose the risks and opportunities we see related to climate change and the ways we are responding to them.

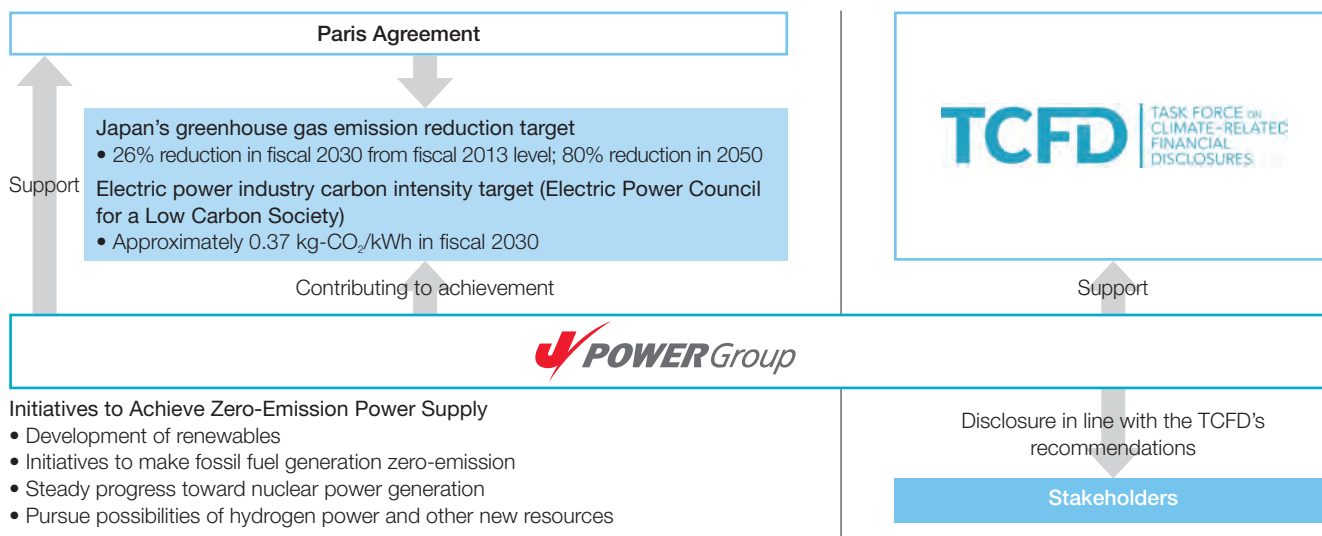
J-POWER supports the Paris Agreement adopted in 2015. To contribute to the achievement of Japan's greenhouse gas emission reduction targets and the Japanese electric power industry's carbon intensity target, which are based on the Paris Agreement, J-POWER

is advancing initiatives to achieve zero-emission power supply.

In addition, in 2019, we announced our support for the TCFD's recommendations.\* To fulfill our duty of accountability to stakeholders regarding climate change-related information, we are working to further enhance the content of our disclosure.

\* TCFD recommendations: Recommendations compiled by the Task Force on Climate-related Financial Disclosures (TCFD) regarding the disclosure by companies and other organizations of climate-related financial information

Note: For disclosure according to the TCFD's recommendations, please refer to pp. 12–15.



## The J-POWER Group's Response to the COVID-19 Pandemic

In light of the global COVID-19 pandemic, J-POWER has established the COVID-19 Response Headquarters headed by the President. The entire Group is working to prevent infection in and outside the Company while making every effort to maintain business continuity in order to ensure stable power supply. We are implementing thoroughgoing measures to prevent the infection, including group infections, of those involved in the construction and inspections necessary to maintain power generation

facilities. We are also taking measures in preparation for the event that an employee should be infected, including securing backup facility operators.

Due to COVID-19, the global economic outlook is extremely unclear. Nevertheless, as an important infrastructure company, we will continue working to ensure stable power supply and the safety and confidence of our stakeholders.

## Shareholder Returns

In 2017, we established a shareholder return policy specifying that, taking into account such factors as the level of profit, earnings forecasts, and our financial condition, we strive to enhance stable, ongoing returns to shareholders in line with a consolidated payout ratio of around 30%, excluding factors causing short-term profit fluctuations. Based on this policy, for fiscal 2019, we once again paid an annual dividend of ¥75 per share.

Going forward, we will continue working to achieve sustained improvement in corporate value and to enhance shareholder returns based on growth.





# Climate Change Scenario Analysis

In this section, we will introduce the J-POWER Group's climate change scenario analysis with reference to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

## Governance

The J-POWER Group is growing its business centered on the electric power generation business in Japan and overseas and recognizes that addressing climate change issues is inextricably intertwined with its business strategy. Accordingly, the Board of Directors has positioned addressing climate change issues at the center of the management plan, recognizing it as one of the Company's most important tasks, and is carefully monitoring

progress in that direction. Furthermore, we have appointed a sustainability promotion manager who is a director and executive vice president to manage specific measures based on management plans.

► For information on the governance framework related to dealing with climate change, please refer to the sustainability promotion structures on page 40.

## Strategy (1) Risks and Opportunities Related to Climate Change

The J-POWER Group's business could be strongly affected by climate change issues in terms of both risks and opportunities. Here we have compiled the main risks and opportunities related to climate change.

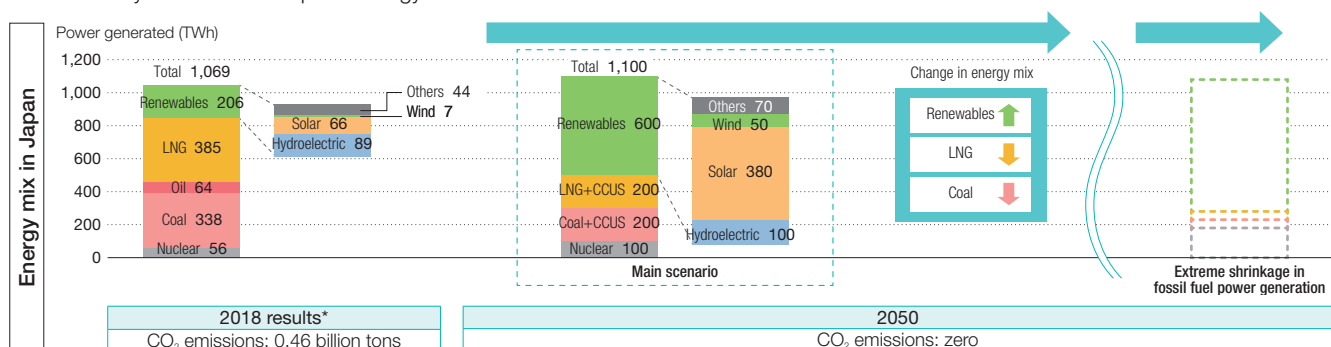
Risks and Opportunities	Category	Content	Period*		
			Short term	Medium term	Long term
Transition risks	Policy and legal	<ul style="list-style-type: none"> <li>Increasingly stringent regulations related to CO<sub>2</sub> emissions (phasing out coal-fired thermal power, introducing carbon pricing, strengthening 2°C/1.5°C goals)</li> <li>Shrinking renewable energy purchase preferential programs</li> </ul>	●	●	●
	Technology	<ul style="list-style-type: none"> <li>Falling utilization rates of thermal power plants due to the widespread introduction of renewable energy</li> <li>Falling advantage of large-scale power generation due to the advancement of distributed power technologies</li> <li>Increasing difficulty in connecting to the grid and securing land due to the widespread introduction of renewable energy</li> </ul>		●	●
	Market	<ul style="list-style-type: none"> <li>Falling income from the thermal power business and difficulties in replacement of power plants due to a shift in preferences from fossil fuel to low-carbon power generation</li> <li>Weakening competitiveness of thermal power business due to falling renewable energy and battery prices</li> <li>Stagnation in renewable energy business due to intensifying competition and rising prices of scarce resources</li> <li>Fuel supply capacity shortage for coal-fired thermal power due to falling coal prices and decreasing demand</li> </ul>		●	●
	Reputation	<ul style="list-style-type: none"> <li>Falling corporate image due to CO<sub>2</sub> emissions</li> <li>Declining investments and funding in fossil fuel businesses</li> </ul>	●	●	●
Physical risks	Acute	<ul style="list-style-type: none"> <li>Damage of facilities due to extreme weather events, such as torrential rains, forest fires, cold snaps, and heat waves.</li> </ul>		●	●
	Chronic	<ul style="list-style-type: none"> <li>Negative effects on facilities of the long-term rise in average temperatures, changing rainfall patterns, and rising sea levels</li> </ul>			●
Opportunities	Resource efficiency	<ul style="list-style-type: none"> <li>Replacement of power plants to reduce fuel and water use</li> <li>Wider use of high-efficiency thermal power that helps reduce CO<sub>2</sub> emissions and meets environmental requirements</li> <li>Cost reductions through more efficient energy use at business sites and offices</li> </ul>	●	●	●
	Energy source	<ul style="list-style-type: none"> <li>Expansion of low-carbon energy sources</li> <li>Diversification of power sources that help ensure energy security</li> <li>Expansion of needs for low-carbon technologies due to governmental carbon pricing incentives</li> </ul>		●	●
	Products and services	<ul style="list-style-type: none"> <li>Development of technologies and products adapted to climate change</li> <li>Providing services that can meet the changing needs of consumers and end users</li> </ul>		●	●
	Markets	<ul style="list-style-type: none"> <li>Access to new energy sources</li> <li>Expansion of electric power markets in emerging countries</li> </ul>		●	●
	Resilience	<ul style="list-style-type: none"> <li>Expansion of renewable energy, distributed power sources, and demand-side businesses</li> <li>Diversification of low-carbon fuels</li> </ul>	●	●	●

\* Short term: to 2025; medium term: to 2030; long term: to 2050

## Strategy (2) Scenario Analysis (Formulation)

To achieve the 2°C goal set by the Paris Agreement, Japan needs to **eliminate CO<sub>2</sub> emissions from power generation no matter what the energy mix is in 2050**. This will require the expansion of renewable energy sources and use of carbon capture, utilization, and storage (CCUS) technologies to make fossil fuel power generation, such as coal-fired thermal power and LNG-fired thermal power, zero emission power generation. At the moment, we cannot accurately foresee what Japan's energy mix in 2050 will be.

The future energy mix will have a large impact on the J-POWER Group as power generation is its main business. The Group has formulated its own main scenario projection regarding Japan's energy mix in 2050. In addition, we have considered what would happen if fossil fuel power generation ultimately shrinks drastically as the increase in renewable energy usage and the decline in the use of fossil fuels accelerate further.



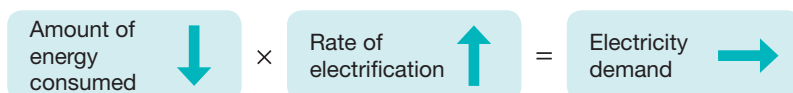
\* Source: Power generated / IEA's "World Energy Outlook 2019" CO<sub>2</sub> emissions / Ministry of the Environment's "Fiscal 2018 Greenhouse Gas Emissions (Confirmed Figures)"



## Strategy (2) Scenario Analysis (Assumptions)

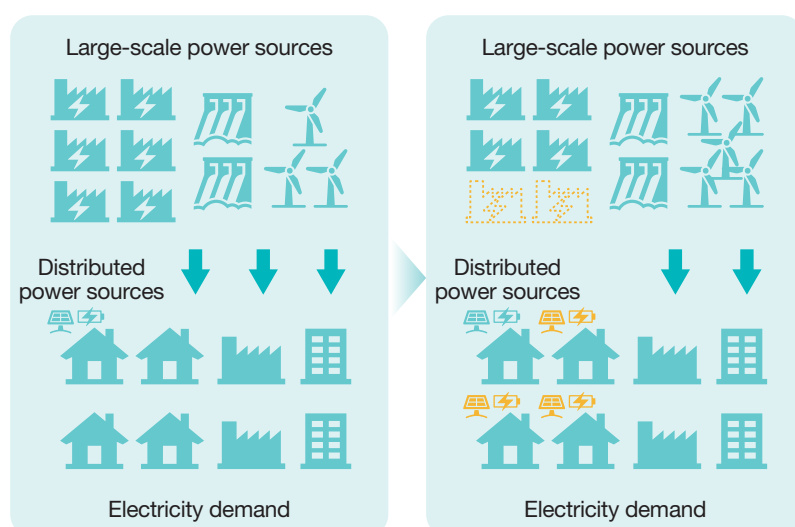
### Assumptions behind Main Scenario

Electricity demand remains at the current level



Expanding decentralization and wider use of solar power and batteries

- Small-scale end users, especially households, are more decentralized, and low-voltage demand (around 35% of power demand) can be replaced with a combination of solar power and batteries.
- There is still a need for large-scale power sources (renewable energy, fossil fuels (+CCUS), nuclear power), especially in the industrial sector.



### Scenario in which fossil fuel power generation shrinks drastically

The J-POWER Group considers a scenario where fossil fuel power generation shrinks drastically to be unrealistic in Japan.

This is because massive installations for carbon-free sources like renewable energy and nuclear power are restricted by the nature of the power sources themselves, and we think a certain amount of fossil fuel power sources will be necessary even in 2050.

Among the various fossil fuels, coal is very valuable in terms of energy security because its supply is stable and not exposed to geopolitical risks. In combination with CCUS technologies that suppress CO<sub>2</sub> emissions, it continues to be in demand.

Renewable Energy	😊	CO <sub>2</sub> -free
	☹️	Restrictions on sites and grid connections Unstable output due to natural fluctuations
LNG	😊	Lower CO <sub>2</sub> emissions than coal Easy adjustment of output
	☹️	Greater geopolitical risks than coal in terms of supply, as 40% of reserves are in the Middle East Higher fuel costs than coal
Coal	😊	Stable supply due to insignificant geopolitical risks Lower fuel costs than LNG
	☹️	Larger CO <sub>2</sub> emissions
Nuclear Power	😊	CO <sub>2</sub> -free Easy fuel stockpiling
	☹️	Social acceptance

## Risk Management

When formulating the scenarios, we focused on changes in Japan's energy mix. Here, we reassessed the main risks and opportunities (and resulting financial impacts) that could accompany those changes in the energy mix if the J-POWER Group should fail to take any countermeasures related to climate change.

As we move from the current situation and begin to face conditions like those outlined in the main scenario or the scenario in which fossil fuel power generation shrinks drastically, we believe the impact of associated risks and opportunities will get bigger.

Regardless of the type of power source, there will always be a risk that return on investment will stagnate amid future environmental changes (stranded asset risk). **We do not think that the stranded asset risk of coal-fired thermal power is higher** than that of gas-fired power, for which the fuel cost is higher, or that of renewables, the utilization rate of which is lower due to restrictions associated with weather and other natural conditions, as coal-fired thermal power is projected to have lower fuel costs\* and a higher utilization rate.

	Risks and Opportunities	Content	Financial Impact
Coal-fired thermal power	Risks	Operation suspension order for coal-fired thermal power (phase out)	Decline in profit due to inability to operate
		Introduction of carbon pricing (carbon taxes, cap-and-trade, etc.)	Increase in power generation costs
		Lower utilization rates due to increase in renewables	
		Expanding decentralization due to lower costs of renewables and batteries	Decline in profit due to lower utilization rates
		Decline in demand for electricity derived from coal-fired thermal power	
		Fall in electricity market prices	Decline in profit due to lower sales prices
Renewables	Risks	Restrictions on investment and funding in coal-fired thermal power	Increase in difficulty procuring capital and stagnation of share prices
		Shrinking renewable energy preferential purchase programs aimed at limiting the increase in the burden on the public	Shrinking earnings opportunities for newly developed power sources
		Lower sales prices due to the intensifying competition among renewables	
	Opportunities	Increasing difficulty in connecting to the grid and securing land due to intensifying competition among renewables	Shrinking earnings opportunities due to stagnation of new development
		Expansion of renewable energy demand	Expanding earnings opportunities due to promotion of new development
Distributed energy services	Opportunities	Stronger renewable energy expansion policies	
		Expanding decentralization centered on renewable energy	Expanding earnings opportunities due to expansion of opportunities associated with distributed energy services

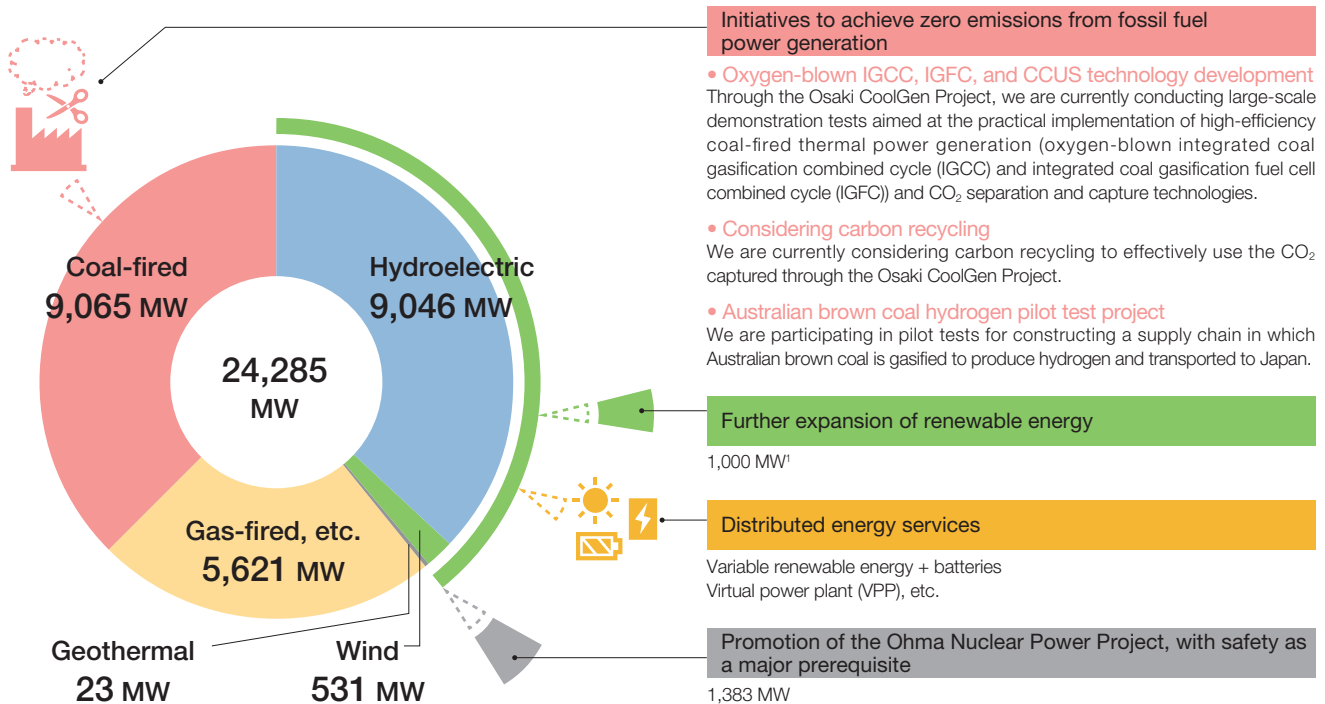
\* Japan is not connected to any other country via gas pipeline and needs to import gas in the form of expensive LNG. This makes coal prices fundamentally lower than gas prices in Japan.

## Metrics and Targets: Initiatives Aimed at Achieving Zero Emissions

Backed by a good balance of varied power sources, the J-POWER Group is leveraging its strengths to achieve **zero emissions** through multifaceted initiatives that diversify risks associated with each power source.

Initiatives to Achieve Zero Emissions	Targets	Deadline
Further expansion of renewable energy	Develop 1,000 MW of new capacity (0.3 billion kWh/year increase in hydroelectric, 2.5 billion kWh/year increase in wind power and others) <sup>1</sup>	FY2025
Initiatives to achieve zero emissions from fossil fuel power generation	Zero CO <sub>2</sub> emissions from fossil fuel power generation	2050
Promotion of the Ohma Nuclear Power Plant Project, with safety as a major prerequisite	Promote the construction of the Ohma Nuclear Power Plant (1,383 MW) with safety as a major prerequisite	Operation start date is to be determined

### J-POWER Group's Global Capacity<sup>2</sup>



1. Compared with FY2017

2. Capacity refers to owned capacity as of March 31, 2020

## Metrics and Targets: Effects of Initiatives

Through initiatives aimed at achieving zero emissions, we made it possible to secure and enhance profit while suppressing risks associated with the changing energy mix in Japan.

	Characteristics of Initiatives	Effects
Coal-fired thermal power	Reduction in CO <sub>2</sub> emissions	Achieving zero emissions in coal use through CCUS technology
	Save on fuel costs	Oxygen-blown IGCC and IGFC are highly efficient, do not use much coal, and make it possible to use inexpensive, low-grade coal
	Synthetic fuel ingredient production	Oxygen-blown IGCC and IGFC with CO <sub>2</sub> separation and capture can be used for manufacturing synthetic fuels and hydrogen in addition to generating electricity
	Superior load tracking capability	It is possible to adjust output in a shorter timeframe than conventional coal-fired thermal power
	Competitive advantage	Oxygen-blown IGCC and IGFC are cutting-edge coal-fired thermal power generation technologies that can reduce CO <sub>2</sub> emissions
Renewable energy		<ul style="list-style-type: none"> <li>• Circumvent demand decrease and operation suspension orders related to coal-fired thermal power</li> <li>• Avoid costs associated with carbon pricing, such as carbon taxes and cap-and-trade</li> <li>• Obviate reasons for restrictions on investment in and funding of coal-fired thermal power, facilitating smooth funding procurement and helping sustain and improve share prices</li> <li>• Because it is highly cost competitive, we expect demand to be higher than for conventional coal-fired thermal power</li> <li>• Even if electricity market prices fall due to the increase in renewables, it will be easy to secure profit</li> <li>• We expect them to contribute to profit through sales of synthetic fuel ingredients</li> </ul>
Distributed energy services		<ul style="list-style-type: none"> <li>• Power can be quickly generated when renewable energy output falls due to weather and other natural circumstances, improving utilization rates and sales and helping further introduce renewables</li> </ul>
Nuclear power generation		<ul style="list-style-type: none"> <li>• By racing ahead of the competition to acquire and apply cutting-edge technologies, we expect to create barriers to entry and expand market share</li> <li>• By quickly developing new renewable projects, earnings opportunities can be realized before risks emerge</li> <li>• As progress is made toward distributed energy services, earnings opportunities are realized</li> <li>• The start of operations at the Ohma Nuclear Power Plant will enable sales expansion without increasing CO<sub>2</sub> emissions</li> </ul>

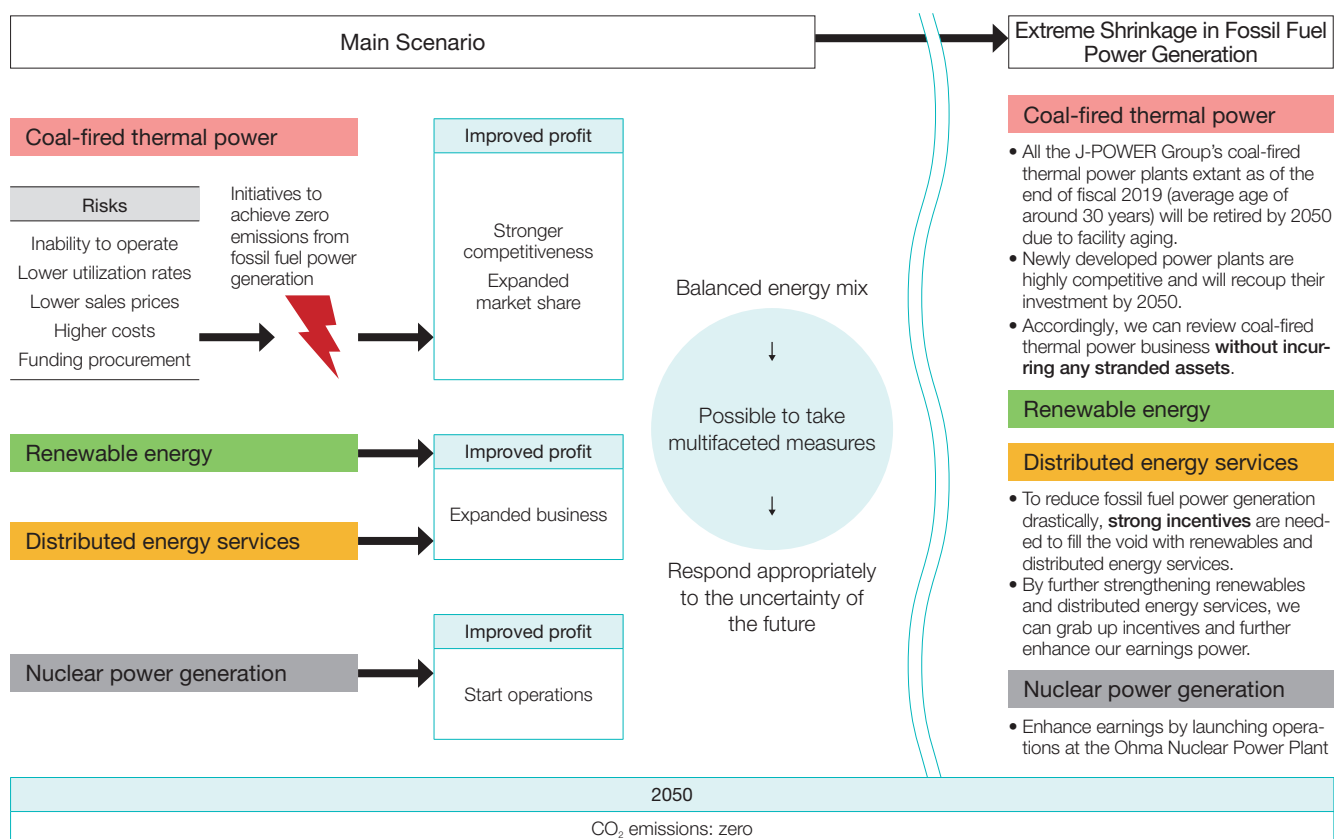
## Metrics and Targets: Enhancing Corporate Value by Achieving Zero Emissions

By pursuing zero emissions initiative, the J-POWER Group will increase its competitiveness and expand its market share in the coal-fired thermal power market while improving profit through the expansion of renewable energy and distributed energy services. Further growth will follow the global roll out of these initiatives.

These efforts will ensure that the Group will strengthen its corporate value while realizing zero emissions, not only if our “main scenario” projection proves right and matches the actual 2050 energy

mix, but in the event that renewables gain more ground and fossil fuel power generation declines.

However, in the event of a hypothetical, unrealistic scenario wherein by 2050 the use of fossil fuel power generation has drastically shrunk, we will strive to enhance corporate value by reviewing the coal-fired thermal power business and further expanding renewable energy, nuclear power, and distributed energy services.



### For Reference: The increasing cost of renewable energy

Currently in Japan, renewable energy costs are decreasing due in large part to the mass production of renewable energy facilities and competition among manufacturers. Although this trend is expected to continue for some time, at some point it will reverse and **costs will rise as greater numbers of renewable energy facilities come on line**.

To install renewable energy facilities, wide swaths of land (or off-shore areas) need to be secured and transmission lines (power-lines) need to be developed to connect the facilities with the closest transmission lines. As development proceeds first from on land (or offshore areas) that can be developed cheaply, renewable facilities developed later will incur higher costs related to the acquisition of land (or offshore area) or to powerline development. For example, even for offshore wind power generation, which is expected to become commonplace, Japan, unlike Europe where offshore wind power has already become widespread, is not surrounded by shallow waters. As development progresses, the wind turbines will need to be situated on deeper seabeds, increasing construction costs.

Furthermore, as the use of renewables increases in Japan, there will be a greater need to invest in electric storage and adjustment functions to absorb output variations caused by fluctuations in sunlight, wind, and other natural conditions. In addition, the trunk transmission lines that connect areas suitable for developing renewables with demand areas will need to be bolstered, or investment in energy-saving and distributed technologies will need to increase in order to accommodate the growing number of renewable power sources using only existing transmission lines.

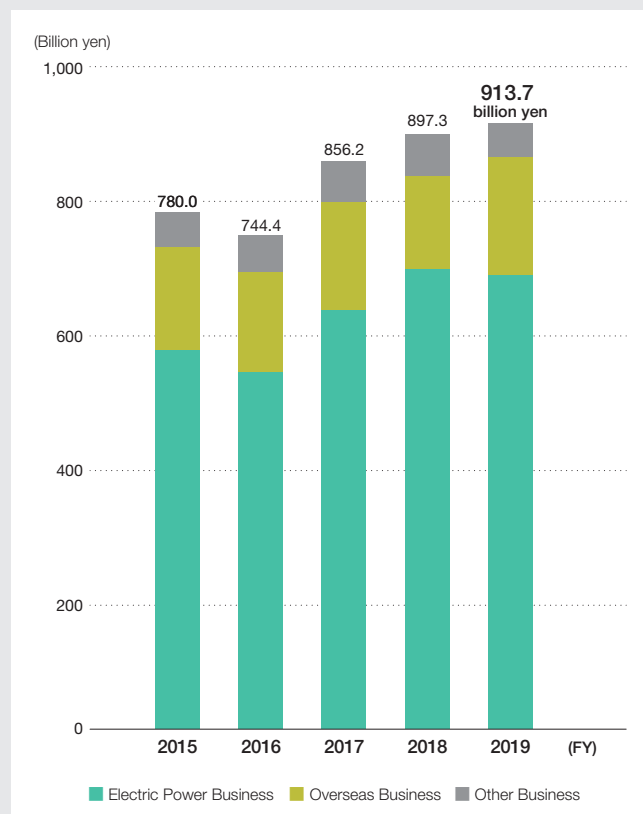
Of course, technological advancements may help us to absorb those cost increases if new low-cost renewable technologies are widely adopted. In addition, we might be able to use inexpensive land or offshore areas overseas if we are connected with other countries through an international power grid. However, at present the feasibility of such projects remains unknown.

If we strive to meet the need for inexpensive and stable electric power while achieving zero emissions in Japan, **a strong choice will be coal-fired thermal power that achieves zero emissions through CCUS technology**. This is why the J-POWER Group is striving not only to expand renewable energy but also to achieve zero emissions from fossil fuel power generation.

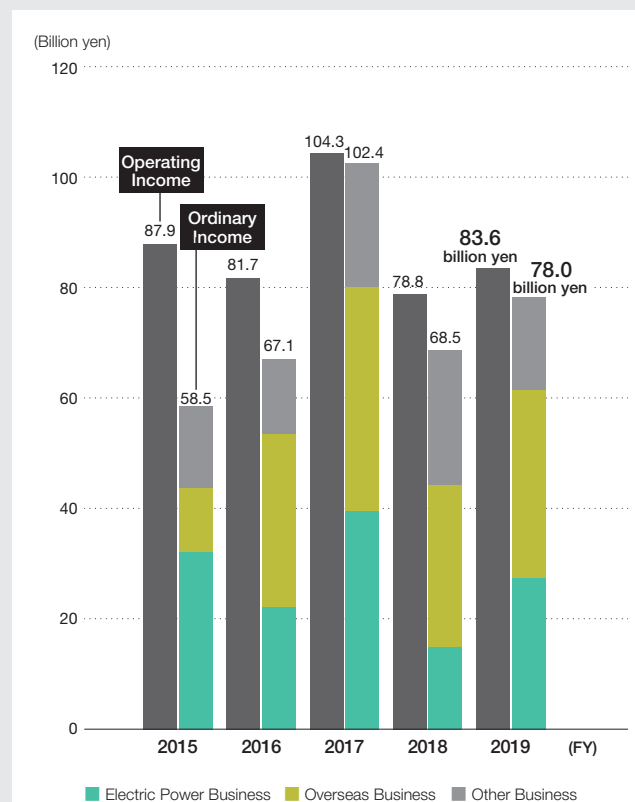
# Financial and Non-Financial Highlights

## Financial Highlights

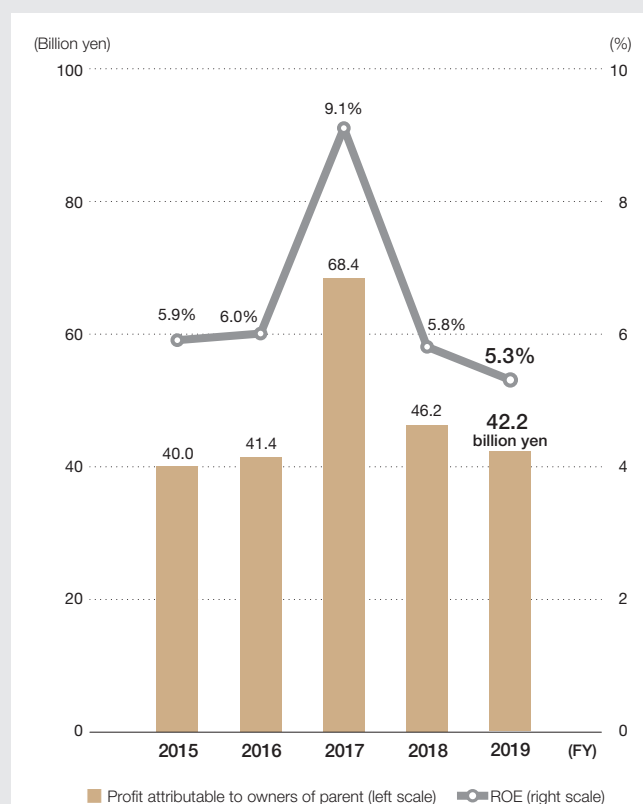
### Operating Revenue (By Segment)\*



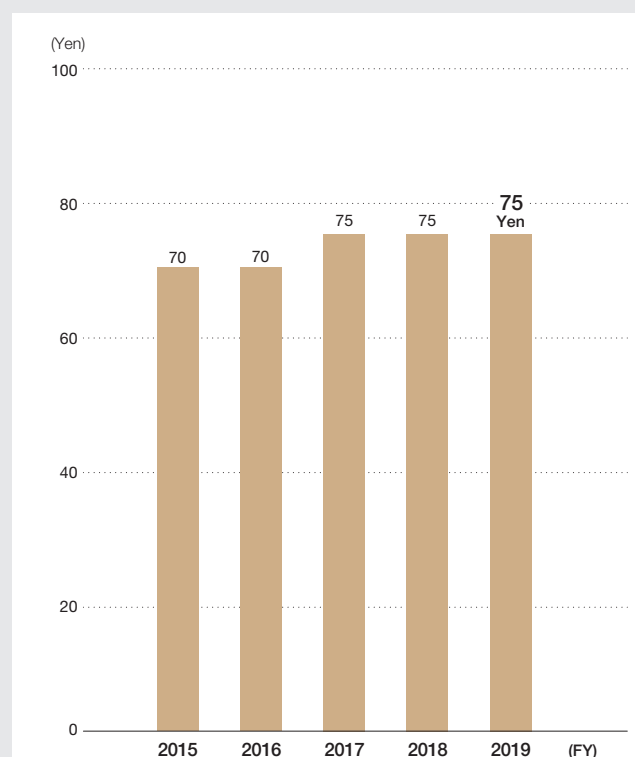
### Operating Income and Ordinary Income\*



### Profit Attributable to Owners of Parent and ROE\*



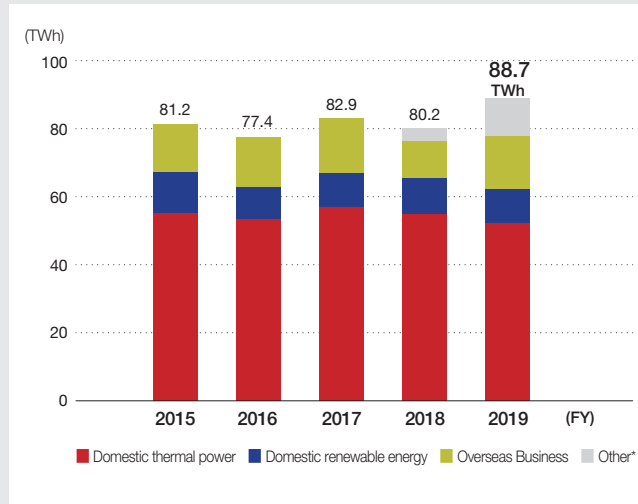
### Dividends Per Share



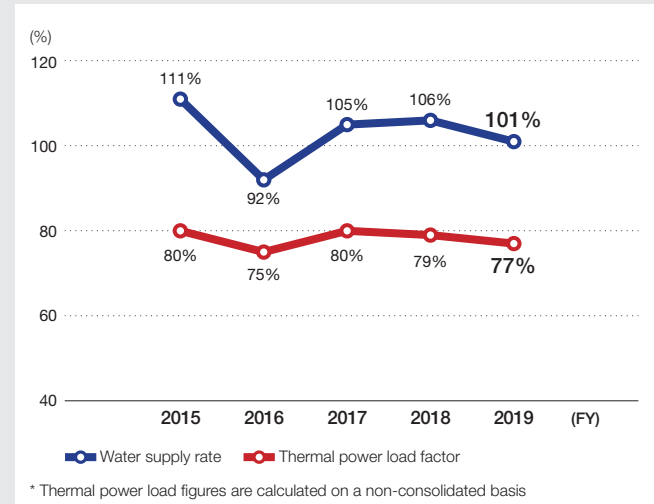
\* Consolidated

## Non-Financial Highlights

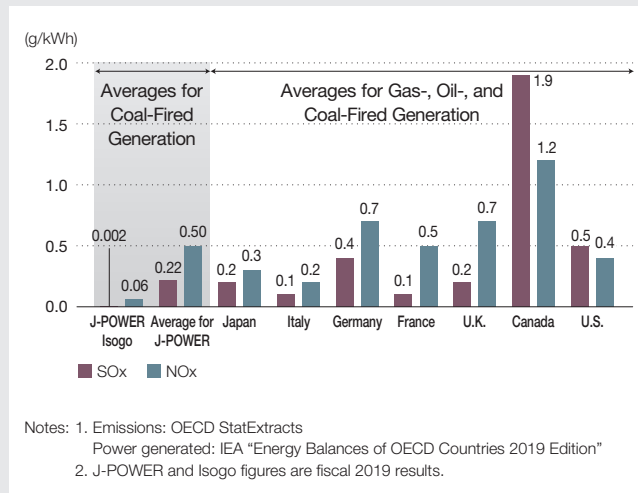
### Electricity Sales Volume



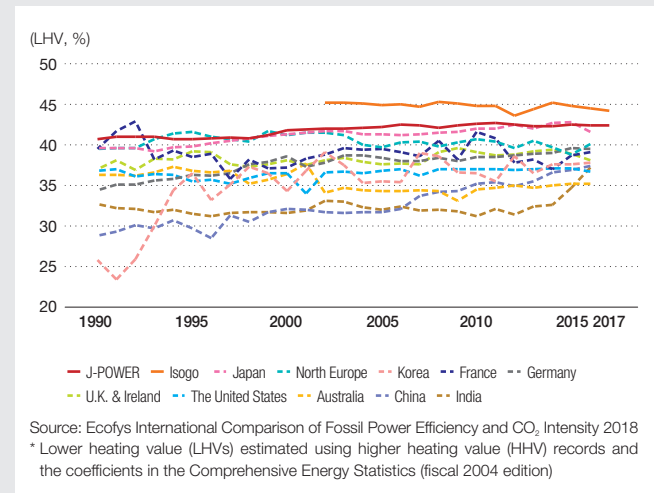
### Water Supply Rate/Thermal Power Load Factor\*



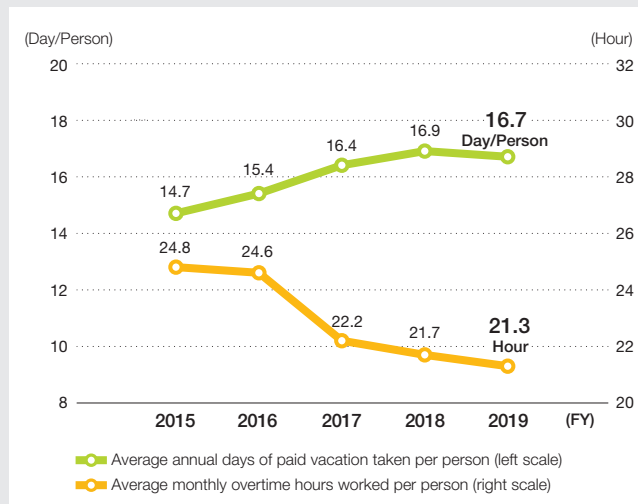
### International Comparison of SOx and NOx Emissions Intensity for Thermal Generation



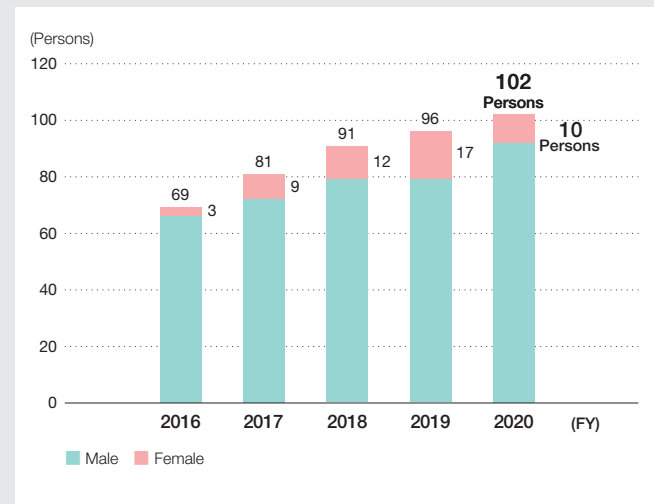
### Average Gross Thermal Efficiency (LHV\*) of Coal-Fired Thermal Power Plants by Country



### Overtime Hours Worked and Days of Paid Vacation Taken



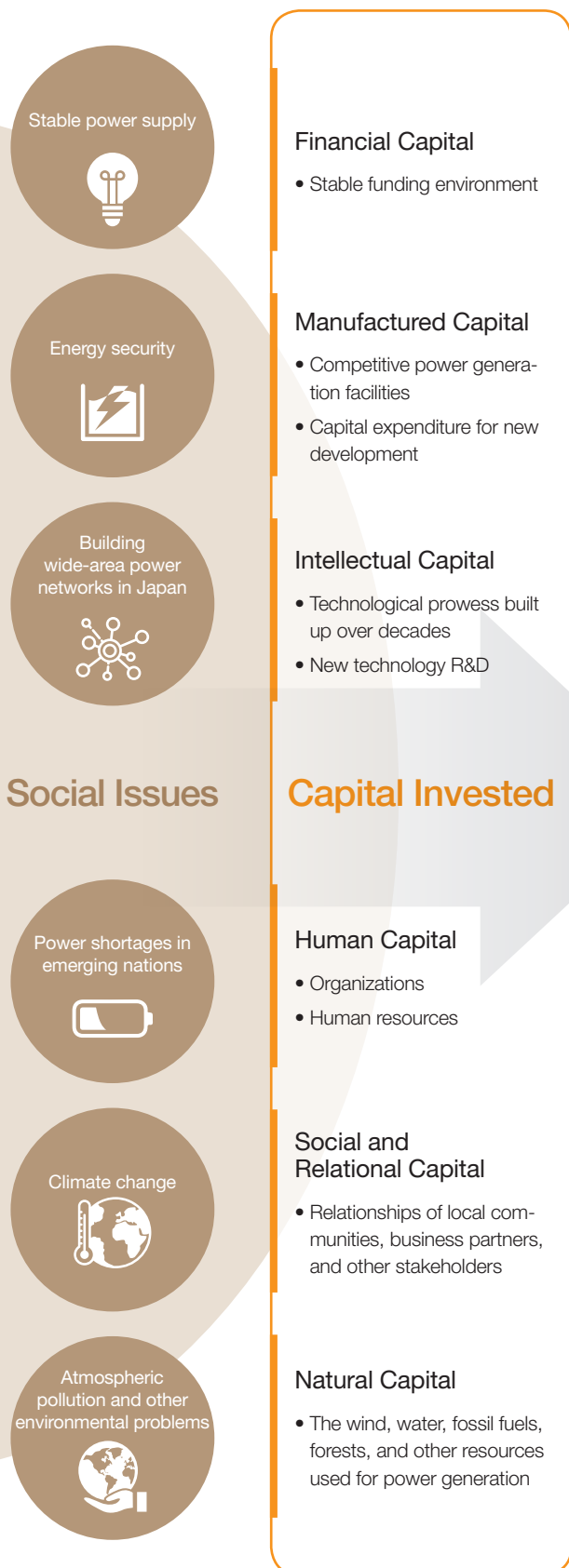
### J-POWER's New Graduates Hired





# The J-POWER Group's Value Creation Process

Based on its Corporate Philosophy—"We will meet people's needs for energy without fail, and play our part for the sustainable development of Japan and the rest of the world"—the J-POWER Group is leveraging the technological prowess, organizational strength, and relationships of trust with local communities and business partners built up in its power generation business in and outside Japan to fulfill its mission of providing a stable power supply while sharing value that helps solve social issues with society at large to contribute to the achievement of the Sustainable Development Goals.



## Area of Business

Electric Power Business	<ul style="list-style-type: none"> <li>Domestic power generation business (renewable energy, thermal power, nuclear power)</li> <li>Transmission business</li> </ul>
Overseas Business	<ul style="list-style-type: none"> <li>Overseas power generation business</li> <li>Overseas consulting business</li> </ul>
Electric Power-Related Business	<ul style="list-style-type: none"> <li>Electric facility design, construction, and maintenance</li> <li>Coal procurement</li> </ul>
Other Business	<ul style="list-style-type: none"> <li>Waste-fueled power generation, cogeneration system business</li> <li>Environment-related business</li> </ul>

## Initiatives to develop zero-for fossil fuel power generation

## The J-POWER Group's Strengths

Technological prowess and facility development, maintenance, and operation know-how

Balanced energy mix  
Strong development track record of CO<sub>2</sub>-free power sources  
Stably operating, competitive power generation facilities

## Foundation for Value Creation

<b>E</b>	<ul style="list-style-type: none"> <li>Environmental initiatives</li> </ul> <p>→ pp. 40-46</p>	<b>S</b>	<ul style="list-style-type: none"> <li>Human resource development</li> <li>Health and safety management</li> <li>Community engagement</li> </ul> <p>→ pp. 47-53</p>
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FY2019  
Sales

FY2019  
Segment income

¥686.0 billion ¥27.4 billion

→ pp. 22-31

→ pp. 35-36

¥179.0 billion ¥33.9 billion

→ pp. 32-34

¥400.5 billion ¥18.5 billion

→ p. 37

¥22.1 billion ¥0.5 billion

→ p. 38

## emission technologies

→ pp. 26-29

Organization and  
human resources  
supporting our  
business foundations

Domestic/Overseas  
business  
Development track  
record

G

- Corporate governance
- Compliance, risk management
- Emergency management

→ pp. 54-62

### Nature and the environment



- Contributing to the realization of a sustainable world through the expansion of renewable energy and technological development of zero-emission technologies for fossil fuel power generation
- Addressing environmental problems by using power sources based on sophisticated environmental technologies

### Local communities



- Contributing to regional economic development and revitalization

### End users



- Power that supports everyday living
- Support for sustained economic growth in Japan
- Advancing economic development in emerging nations
- Helping create wide-area power networks in Japan

### Business partners



- Affordable, stable, and high-quality power supply
- Synergy through business collaboration

### Shareholders and investors



- Stable, ongoing shareholder returns
- Transparent IR/SR information

### Employees



- Workplaces that are safe, healthy, and rewarding
- Opportunities to improve abilities and labor productivity

## Value Provided to Society

## Related SDGs



# Domestic and Overseas Business Development

## The J-POWER Group's Domestic and Overseas Business Development

Since its foundation in 1952, the J-POWER Group has developed power generation facilities in and outside Japan. As of March 2020, these power generation facilities have grown to a capacity of approximately 24 GW, of which domestic power generation facilities account for around 17 GW (owned capacity basis) and overseas facilities for 7 GW (owned capacity basis).

In Japan, the Group has renewable energy facilities (including hydroelectric, wind and geothermal) and thermal power generation facilities in a total of 97 locations nationwide.\* Furthermore, the Group has electric power transmission and substation facilities, including cross-regional interconnection lines and a frequency converter station, supporting part of the wide-area power distribution network.

Overseas, the Group has been engaged in the overseas consulting business for more than 50 years, with a track record of 361 projects in 64 countries and regions. We entered the overseas power generation business in earnest in 2000. Today, we have commenced operations at power generation facilities in five countries and regions, including Thailand, other Asian countries, and the United States.

\* Power generation facilities of the Electric Power Business

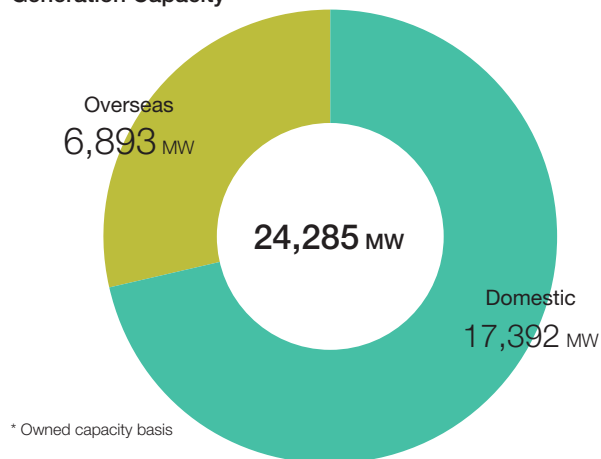
### Power Generation Capacity in Operation (Owned Capacity Basis)

Domestic	97 locations	17,392 MW
Hydroelectric Power	60 locations	8,560 MW
Thermal Power	12 locations	8,278 MW
Wind Power	24 locations	531 MW
Geothermal Power	1 location	23 MW

### Transmission and Transformation Facilities

Transmission Lines		2,404.6 km
AC power transmission lines		2,137.4 km
DC power transmission lines		267.2 km
Substations	4 locations	4,301 MVA
Frequency Converter Station	1 location	300 MW
AC/DC Converter Stations	4 locations	2,000 MW
Wireless Communication Facilities (circuit length)		5,833 km

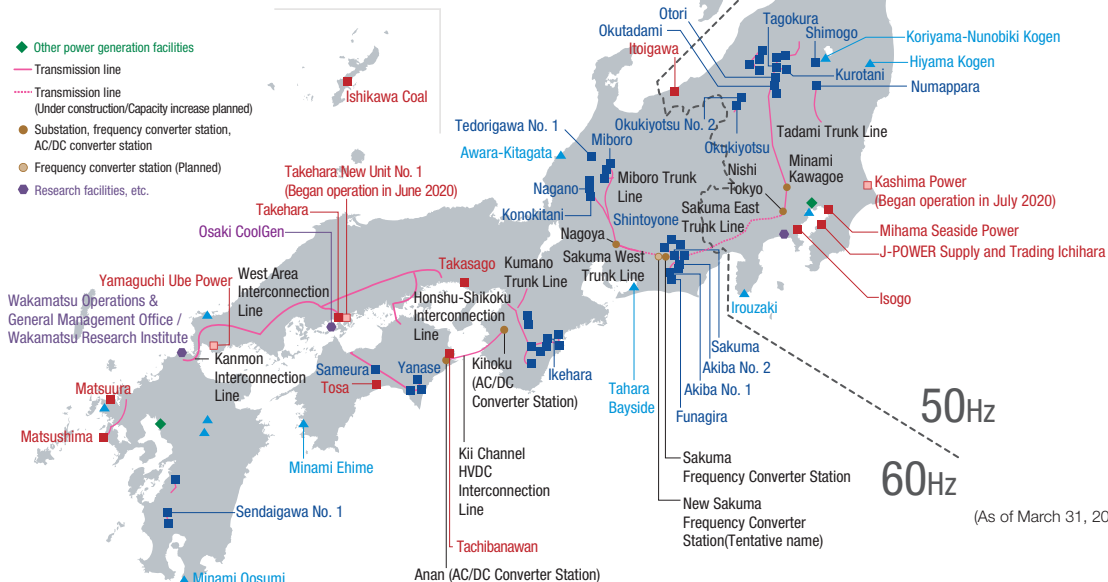
### The J-POWER Group's Consolidated Power Generation Capacity \*



(As of March 31, 2020)

### Main Facilities

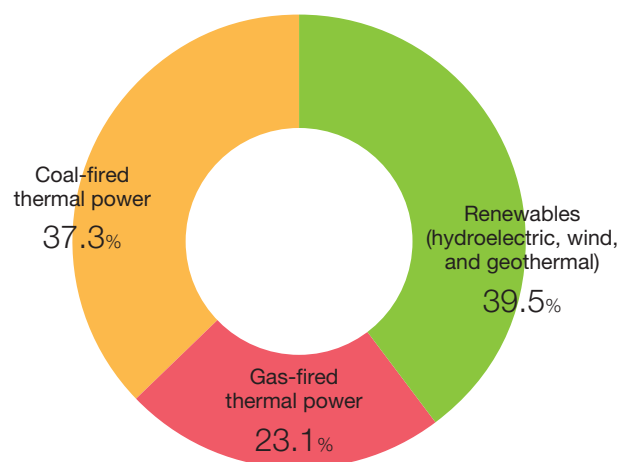
- Hydroelectric power plant
- Hydroelectric power plant (Under construction/Planned)
- Thermal power plant
- Thermal power plant (Under construction/Planned)
- Nuclear power plant (Under construction)
- Geothermal power plant
- Geothermal power plant (Under construction)
- Wind power farm/plant
- Wind power farm/plant (Under construction)
- Other power generation facilities
- Transmission line
- Transmission line (Under construction/Capacity increase planned)
- Substation, frequency converter station, AC/DC converter station
- Frequency converter station (Planned)
- Research facilities, etc.



## The J-POWER Group's Energy Mix

Renewable energy accounts for about 40% of the J-POWER Group's global power generation capacity, gas-fired thermal power for about 20%, and coal-fired thermal for about 40%. The Group maintains a well-balanced energy mix that is not over-reliant on any one power source.

The J-POWER Group's Global Energy Mix



(As of March 31, 2020)

### Overseas Power Generation Business

● In operation	5 countries/regions	34 projects	6,893 MW (owned capacity)
● Of which: Majority owned projects	1 country	9 projects	2,376 MW (owned capacity)
○ Under construction/development	3 countries	4 projects	2,182 MW (owned capacity)

### Overseas consulting service projects

64 countries/regions 361 projects

### Europe

#### Overseas power generation business

Under construction  
1 country; 1 project; 214 MW

#### Consulting service projects

14 countries; 21 projects

### Asia

#### Overseas power generation business

In operation  
4 countries/regions; 4,877 MW  
Under construction  
1 country; 1 project; 680 MW

#### Consulting service projects

21 countries/regions; 248 projects

### North America

#### Overseas power generation business

In operation  
1 country; 2,016 MW  
Under construction  
1 country; 1 project; 1,200 MW  
Under development  
1 country; 1 project; 88 MW

#### Consulting service project

1 country; 1 project

### Middle East/Africa

#### Consulting service projects

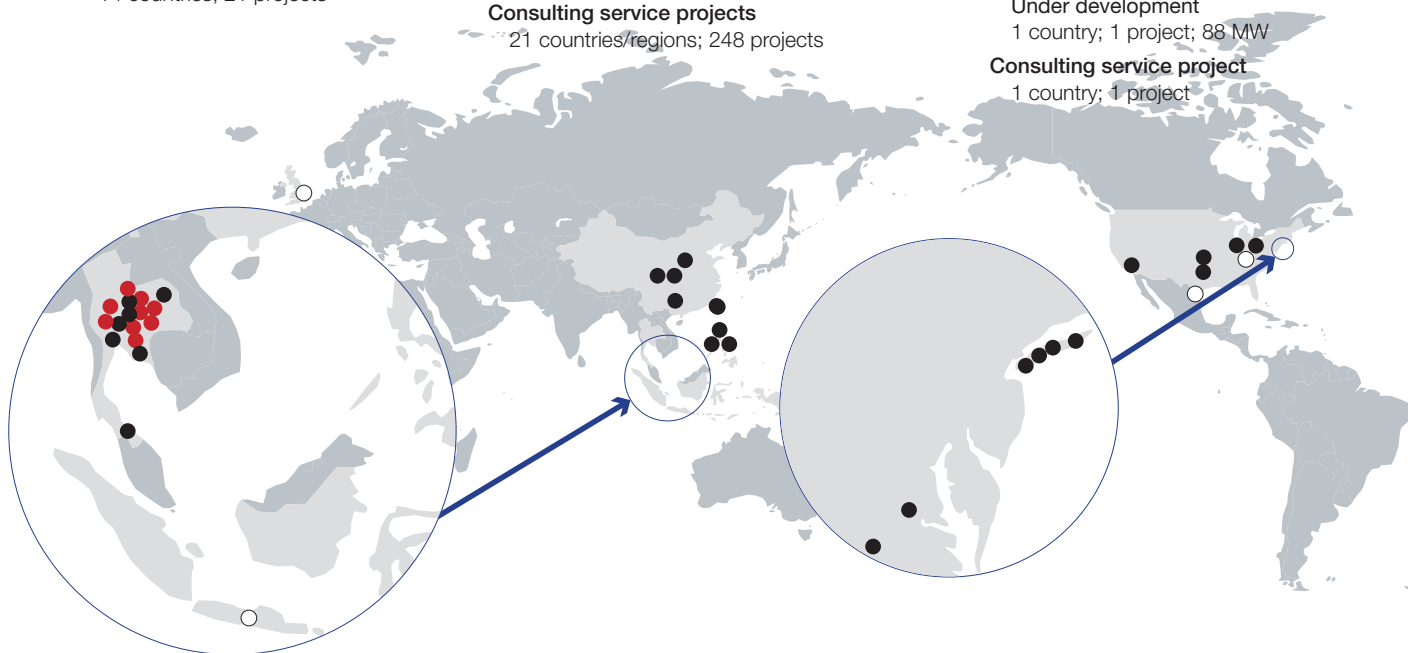
15 countries; 42 projects

### Central and South America

#### Consulting service projects

13 countries; 49 projects

(As of March 31, 2020)

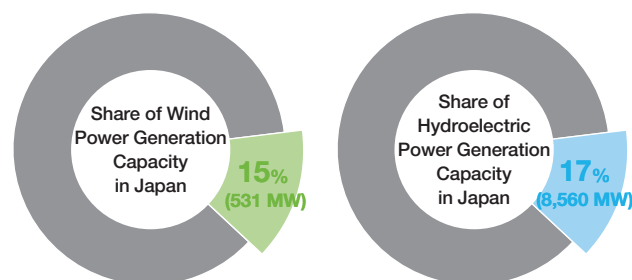


# Further Expansion of Renewable Energy

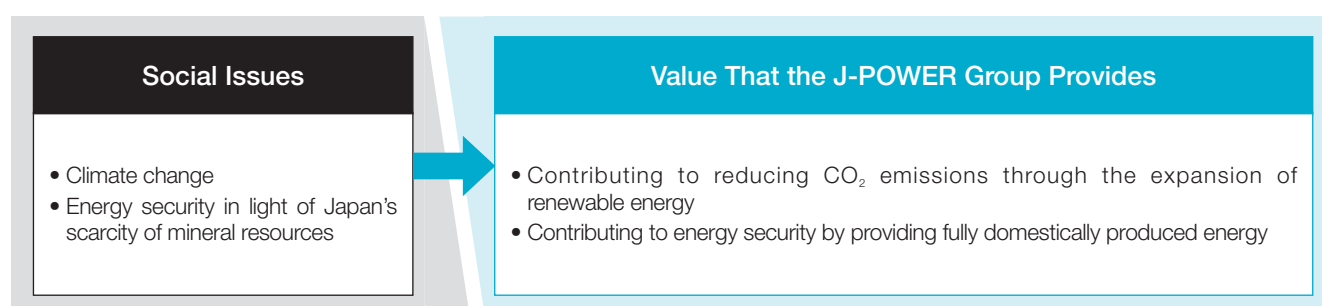
The J-POWER Group utilizes hydroelectric power, wind power, and geothermal power—all sources of renewable energy—across Japan. Renewable energy accounts for approximately 40% of the Group's total generation capacity in Japan (owned capacity basis). Nationwide, the Group owns 60 hydroelectric power plants with a total capacity of 8,560 MW and 24 wind power facilities with a total capacity of 531 MW, making it Japan's second-ranked company in terms of both hydropower and wind power generation capacity.

To address the problem of climate change, a material management issue, as a leader in renewable energy, the J-POWER Group will continue to help reduce CO<sub>2</sub> emissions while contributing to Japan's energy security by expanding use of these fully domestically produced, CO<sub>2</sub>-free forms of renewable energy.

## Second in Japan in both Hydroelectric and Wind Power Generation Capacity



Sources: Compiled from Electric Power Survey Statistics (Agency for Natural Resources and Energy) (Owned capacity basis, as of March 31, 2020)



## Achievements in Fiscal 2019

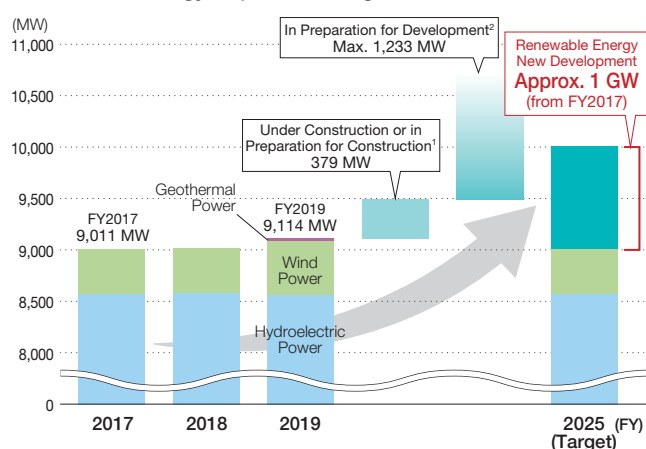
	Month/Year	Project	Generation Capacity (Owned Capacity)	Status
Hydroelectric	Apr. 2019	Began construction on the Ashoro Repowering project (Hokkaido Prefecture)	40 MW	Under construction Scheduled for completion in fiscal 2022
	Apr. 2019	Began construction on the Shinkatsurazawa/Kumaoi hydroelectric plant (Hokkaido Prefecture)	17 MW	Under construction Scheduled for completion in fiscal 2022
Onshore wind power	Jun. 2019	Began construction on the Kaminokuni No. 2 Wind Farm (Hokkaido Prefecture)	42 MW	Under construction
	Jan. 2020	Began operation of the Setana-Osato Wind Farm (Hokkaido Prefecture)	50 MW	In operation
	Jan. 2020	Began operation of the Nikaho No. 2 Wind Farm (Akita Prefecture)	41 MW	In operation
Offshore wind power	Jul. 2019	Began development survey of Saikai offshore wind power generation project (Nagasaki Prefecture)	Max. 513 MW	Development survey in progress
	Aug. 2019	Began development survey of Hiyama area offshore wind power generation project (Hokkaido Prefecture)	Max. 722 MW	Development survey in progress
	Nov. 2019	Began development survey of Fukui Prefecture Awara offshore wind power generation project (Fukui Prefecture)	Max. 350 MW	Development survey in progress
Geothermal	Apr. 2019	Began construction on the replacement of Onikobe Geothermal Power Plant (Miyagi Prefecture)	14.9 MW	Under construction Scheduled for completion in April 2023
	May 2019	Began operation of the Wasabizawa Geothermal Power Plant (Akita Prefecture)	46 MW (23 MW)	In operation
	Jul. 2019	Geothermal resource surveys at Takahinatayama site (Miyagi Prefecture)	—	Development survey in progress
	Aug. 2019	Began construction on the Appi Geothermal Power Plant (Iwate Prefecture)	14.9 MW (2 MW)	Under construction Scheduled for completion in April 2024



## Renewable Energy Expansion Target in the Medium-Term Management Plan

The J-POWER Group established the Renewable Energy Business Strategy Department in April 2019 and is reinforcing new project development and the technological development that supports such projects. Through these efforts, we are steadily advancing toward the achievement of the Medium-Term Management Plan's target for fiscal 2025 of approximately 1 GW in new development (compared with fiscal 2017, a 0.3 TWh/year increase in hydroelectric and 2.5 TWh/year increase in wind and others).

### Renewable Energy Expansion Target



## Initiatives Aimed at Achieving the Medium-Term Management Plan Target

### Hydroelectric Power

The J-POWER Group boasts a track record in the building and operation of hydroelectric power plants that extends back more than half a century. Beginning in the mid-1950s, in a bid to solve postwar power shortages, the Company developed many large-scale conventional hydroelectric power plants. Subsequently, from the 1970s onward, the Company developed large-scale pumped storage hydroelectric power plants.

For resource-poor Japan, hydroelectric power represents a valuable, fully domestic energy resource and, as a CO<sub>2</sub>-free power source, plays a central role in renewable energy. In addition, hydroelectric power plants have the advantage of being able to rapidly respond to demand fluctuations and, as such, offer value in terms of ability to increase supply to cover peak demand and thereby aid in the daily and seasonal supply-demand balancing of Japan's grid.

In addition to continuing the efficient maintenance and management of existing hydroelectric power generation facilities, the Company is carrying out comprehensive renewals (repowering) of its main power generating machinery to increase capacity and the power generated through optimal designs utilizing the latest technologies. The Company is also undertaking the development of small- to medium-scale hydroelectric power plants that utilize untapped hydroelectric resources in order to effectively utilize this precious resource to the maximum extent possible.



Construction on the Shinkatsurazawa Project

Project	Generation Capacity	Status
Ogamiyog Repowering	20 MW ▶ 21 MW	In preparation for repowering
Nagayama Repowering	37 MW ▶ 40 MW	In preparation for repowering

### Geothermal Power

The J-POWER Group has a track record of operating geothermal power plants that goes back more than 40 years. Leveraging the comprehensive know-how developed through this business, encompassing geothermal resource surveying and management as well as power plant planning, construction, and operations, we are carrying out stable plant operations from a long-term perspective while actively advancing new development.

Achievements in fiscal 2019 included the May 2019 commencement of operations of Wasabizawa Geothermal Power Plant (capacity 46 MW), developed as a joint venture with Mitsubishi Materials Corporation and MITSUBISHI GAS CHEMICAL

COMPANY, INC., in Yuzawa City, Akita Prefecture. In addition, we began construction of the Appi Geothermal Power Plant (capacity 14.9 MW), also a joint venture with these two companies, in Hachimantai City, Iwate Prefecture, in August 2019. In non-joint-venture projects, we began construction to replace the Onikobe Geothermal Power Plant (capacity 14.9 MW) in April 2019. Located in Osaki City, Miyagi Prefecture, the existing plant had been in continuous operation for more than 40 years.

We continue to proactively survey the geothermal resources at new candidate sites with the aim of creating new projects down the line.

## Further Expansion of Renewable Energy

### Wind Power

The J-POWER Group is a pioneer in the wind power generation business, having commenced operations at its first wind farm in 2000 and steadily expanded this business since then.

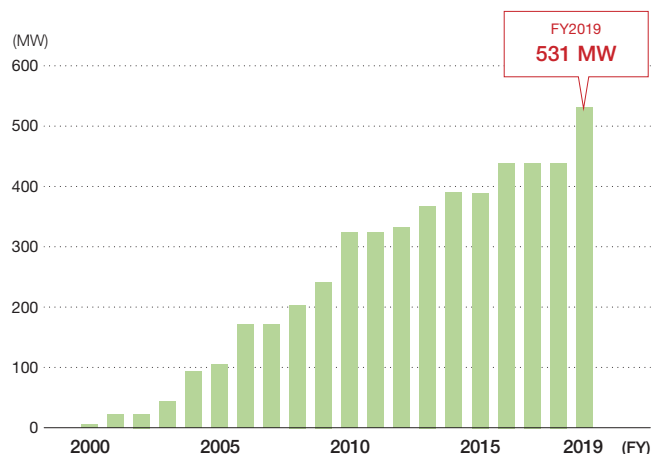
Drawing on its many years of experience, expertise, and technologies in the building, operation, and maintenance of power plants and transmission lines, the Company has created a system that covers the full gamut of the wind power business, from surveys of wind conditions to wind farm design, construction, and operation and maintenance (O&M). Leveraging its diverse experience, the Company is making its O&M systems more efficient while working to improve utilization rates and enhance profitability.

In terms of onshore wind power, we are steadily advancing new development and replacement projects. Currently, two projects are under construction, and 19 projects are in construction preparation or development preparation. The Company will continuously seek locations that possess wind conditions suitable for new facilities and steadily develop new projects in the years to come.

Under Construction	Generation Capacity
Kuzumaki No. 2 (Iwate Prefecture)	45 MW
Kaminokuni No. 2 (Hokkaido Prefecture)	42 MW

In Preparation for Construction or Under Development (11 new development projects, 8 replacement projects)	Generation Capacity
Minami Ehime No. 2 (Ehime Prefecture)	Max. 41 MW
Wajima (Ishikawa Prefecture)	Max. 90 MW
Naka-Noto (Ishikawa Prefecture)	Max. 65 MW
Fukui Ono Ikeda (Fukui Prefecture)	Max. 99 MW
Kichu (Wakayama Prefecture)	Max. 86 MW
Hiroshima-Nishi (Hiroshima Prefecture)	Max. 155 MW
Reihoku Kunimiyama (Kochi Prefecture)	51 MW
Seiyo Yusuhara (Ehime Prefecture)	Max. 163 MW
Youra (Oita Prefecture)	Max. 65 MW
Hisatsu (Kumamoto Prefecture)	Max. 129 MW
Kita-Kagoshima (Kagoshima Prefecture)	Max. 215 MW
Sarakitomanai (Replacement) (Hokkaido Prefecture)	15 MW
Tomamae (Replacement) (Hokkaido Prefecture)	31 MW
Shimamaki (Replacement) (Hokkaido Prefecture)	4 MW
Kuzumaki (Replacement) (Iwate Prefecture)	21 MW
Nikaho (Replacement) (Akita Prefecture)	25 MW
Tahara Seaside (Replacement) (Aichi Prefecture)	Max. 52 MW
Aso Nishihara (Replacement) (Kumamoto Prefecture)	18 MW
Minamiosumi (Replacement) (Kagoshima Prefecture)	20 MW

### Domestic Wind Power Generation Owned Capacity



Kuzumaki No. 2 (Iwate Prefecture) adjustment testing



Nikaho No. 2 (Akita Prefecture) (started operation in January 2020)

## Offshore Wind Power Initiatives

Since fiscal 2009, J-POWER has been advancing demonstration studies of offshore wind power off the coast of Kitakyushu, amassing experience in the construction and operation of offshore windmills ahead of the competition. In fiscal 2016, a consortium that includes the Company was selected as the preferred bidder following a public tender for the installer and operator of the Hibikinada Offshore Wind Farm off the coast of Kitakyushu in Fukuoka Prefecture. We are now conducting surveys of the wind conditions and marine areas toward the commercialization of offshore wind power generation in Hibikinada.

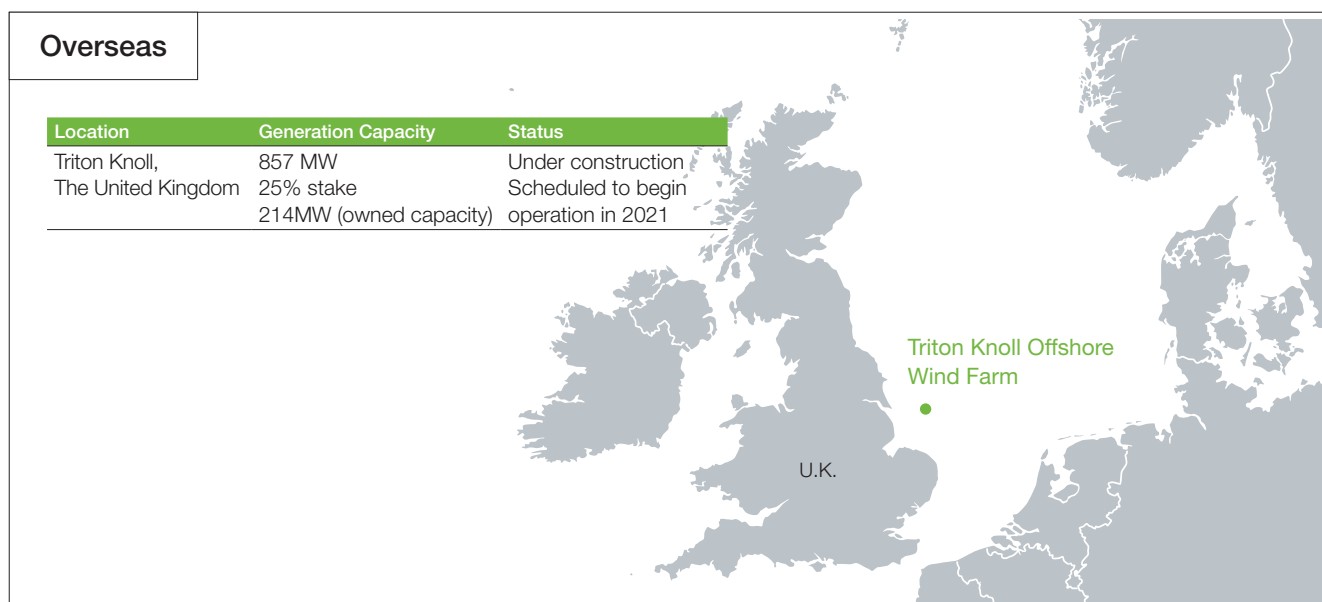
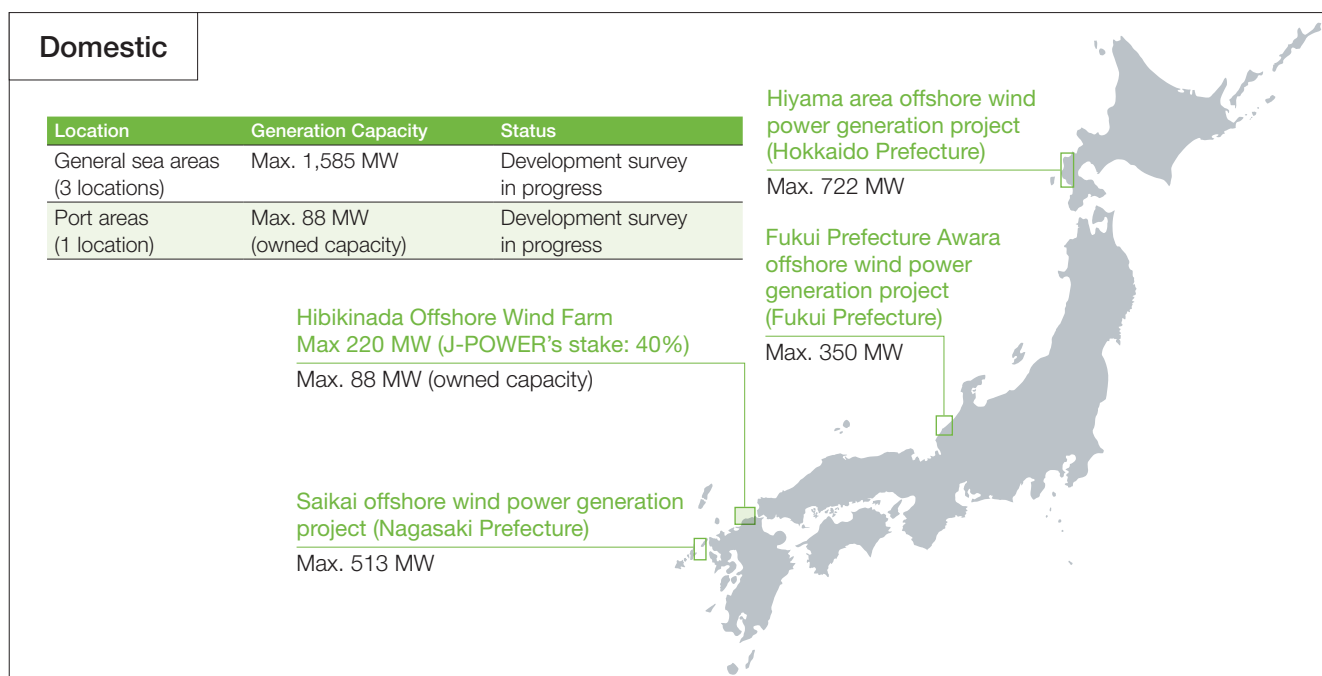
Overseas, in August 2018, J-POWER acquired a 25% stake in the Triton Knoll offshore wind project in the United Kingdom. The

Company will be involved in this offshore wind power project from the construction phase onward, accumulating know-how encompassing the construction, maintenance, and operation of offshore wind power facilities.

In fiscal 2019, we began surveys aimed at the development of offshore wind power in three open water locations in Japan.

Leveraging the expertise built up through the Company's long-standing onshore wind power business and the know-how gained from participating in offshore wind power generation projects from the earliest stages, we will proactively capture business opportunities in the development of domestic open water offshore wind power, an area that is expected to grow going forward.

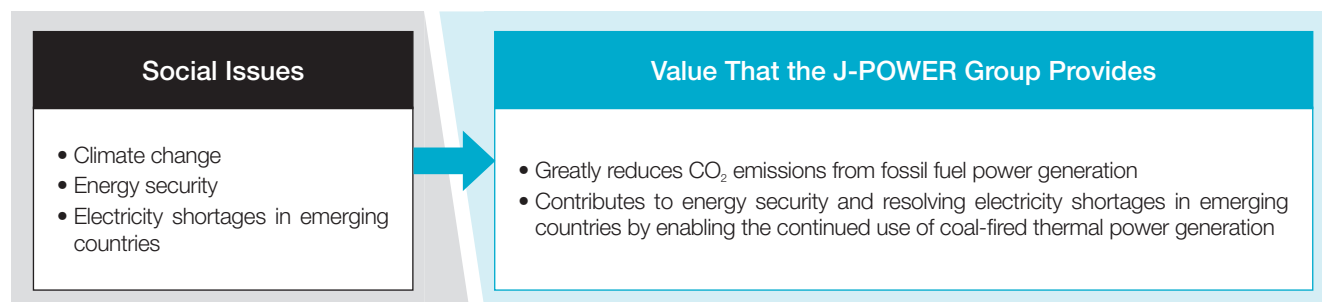
### Offshore Wind Power Initiatives (As of March 31, 2020)



# Zero Emissions from Fossil Fuel Power Generation

The use of renewable energy is currently expanding on a global scale. However, CO<sub>2</sub>-free renewables and nuclear power alone are not sufficient to meet power demand in Japan or around the world. As such, significantly reducing the CO<sub>2</sub> emitted from power generation using fossil fuels, such as coal and natural gas (fossil fuel power generation), is essential to meeting the goals of the Paris Agreement and Japan's greenhouse gas reduction targets.

The J-POWER Group is implementing initiatives to achieve zero emissions from fossil fuel power generation with the aim of greatly reducing CO<sub>2</sub> emissions.



## CO<sub>2</sub> Separation, Capture, Utilization and Storage Initiatives

The J-POWER Group is developing CO<sub>2</sub> separation, capture, utilization and storage (CCUS) technologies as it aims for major reductions in the CO<sub>2</sub> emissions from fossil fuel power generation.

### CO<sub>2</sub> Separation and Capture

The J-POWER Group has carried out significant testing related to the separation and capture of CO<sub>2</sub> emitted by coal-fired thermal power plants. Beginning in fiscal 2019, we have been conducting large-scale demonstration trials at the Osaki CoolGen Project.

Fiscal year	2005	2010	2015	2020
Matsushima Thermal Power Plant (pulverized coal-fired, post-combustion capture)		2007 2008 *1		
EAGLE <sup>2</sup> Project (gasification, pre-combustion capture)		2008 2013		
Osaki CoolGen Project (gasification, pre-combustion capture)			Large-scale demonstration trials	2019 2020
Callide Oxyfuel Project (pulverized coal-fired, oxy-fuel combustion)		2012 2014 *3		

1. Joint project with Mitsubishi Heavy Industries, Ltd. 2. Please refer to page 27 for details.

3. A public-private, Japanese-Australian joint project. The project conducted the world's first trials of an integrated process involving oxy-fuel and CCS at an actual power plant.

### CO<sub>2</sub> Utilization and Storage

CO<sub>2</sub> that has been separated and captured can be put to use or stored underground.

#### Utilization

Methods of utilizing captured CO<sub>2</sub> include injecting it into depleted oil fields to increase crude oil production in a process known as enhanced oil recovery (EOR), using it directly as dry ice or in other forms, and using it as an input to manufacture chemicals, fuels, or other products.

The J-POWER Group is considering carbon recycling using CO<sub>2</sub> captured by the Osaki CoolGen Project. Specifically, we are looking at using it to increase the concentration of CO<sub>2</sub> in agricultural greenhouses to accelerate crop growth and improve productivity in addition to developing technology for using photosynthetic microalgae mass cultures to produce carbon-neutral jet fuel.

#### Storage

Storing a large amount of CO<sub>2</sub> deep underground has the potential to significantly reduce the escape of CO<sub>2</sub> to the atmosphere.

J-POWER took part in the Callide Oxyfuel Project, a project jointly conducted by the Japanese and Australian governments and private sectors, which conducted trials in 2014 in which separated and captured CO<sub>2</sub> from a coal-fired thermal power plant was stored underground in Australia.

Furthermore, Japan CCS Co., Ltd., in which J-POWER is an investor, conducted large-scale CCS demonstration trials in Tomakomai City, Hokkaido, under contract with the national government. Japan CCS began injecting CO<sub>2</sub> into underground reservoirs in fiscal 2016 and completed the injection of a cumulative 0.3 million tons of CO<sub>2</sub> in fiscal 2019.

Japan CCS is also surveying potential sites for CO<sub>2</sub> storage on behalf of the government.

## Initiatives to Achieve Zero CO<sub>2</sub> Emissions

In addition to CCUS, to reduce the CO<sub>2</sub> itself that is produced during coal use, the J-POWER Group is advancing initiatives aimed at the commercialization of oxygen-blown integrated coal gasification combined cycle (IGCC)<sup>1</sup> and the R&D of high-efficiency power generation technologies, such as integrated coal gasification fuel cell combined cycle (IGFC)<sup>2</sup> technologies.

Oxygen-blown IGCC offers high thermal efficiency, helping reduce CO<sub>2</sub> emissions. In addition, the gases produced contain a high concentration of carbon monoxide (CO), which facilitates the efficient separation and capture of CO<sub>2</sub>, so this generation technology is very well suited for CCUS.

Furthermore, at conventional coal-fired thermal power plants, we are not only introducing high-efficiency power generation technologies but also using biomass fuel mixed combustion to reduce carbon emissions. In addition to continuing the mixed combustion initiatives already in practice, we aim to realize up to 10% mixed combustion at the Takehara Thermal Power Plant New Unit No. 1, which commenced operations in June 2020.

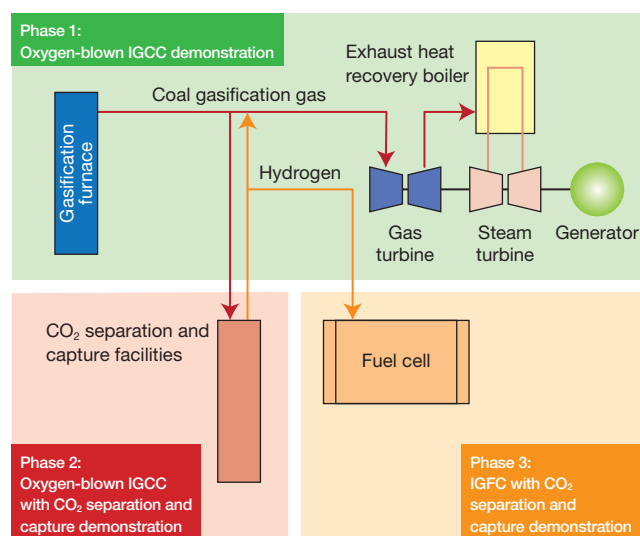
1. Integrated coal gasification combined cycle (IGCC): A combined cycle power generation system with a twin-turbine configuration, comprising a gas turbine driven by the combustion of gas produced by gasifying coal and a steam turbine driven by the exhaust gases from the gas turbine. Oxygen-blown refers to the use of oxygen in the coal gasification process.
2. Integrated coal gasification fuel cell combined cycle (IGFC): An integrated power generation system that combines IGCC with fuel cells and achieves the highest level of thermal efficiency from coal-fired thermal power

## Osaki CoolGen Project

Beginning in fiscal 2002, J-POWER was engaged in the EAGLE<sup>3</sup> Project in collaboration with the New Energy and Industrial Technology Development Organization (NEDO), a national research and development body. This project was aimed at establishing technologies for realizing oxygen-blown IGCC.

Employing insights and results gleaned from the EAGLE Project, the Company has since been engaged in the Osaki CoolGen Project with support from NEDO and in collaboration with The Chugoku Electric Power Co., Inc. Phase 1 of this project, a demonstration test of oxygen-blown IGCC (166 MW capacity, with a coal consumption volume of 1,180 tons per day), was completed in February 2019. In Phase 2, launched in December 2019, we are adding CO<sub>2</sub> separation and capture facilities to conduct demonstration testing of IGCC with CO<sub>2</sub> separation and capture. After Phase 2 is completed, in Phase 3, we will use fuel cells to conduct further demonstration testing of IGFC with CO<sub>2</sub> separation and capture.

3. EAGLE: An oxygen-blown coal gasification project that was conducted at the Wakamatsu Research Institute. The name EAGLE is an acronym for coal Energy Application for Gas, Liquid & Electricity.



Fiscal	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Phase 1</b> Oxygen-blown IGCC	Design/manufacturing/installation					Demonstration tests					
<b>Phase 2</b> Oxygen-blown IGCC with CO <sub>2</sub> separation and capture					Design/manufacturing/installation			Demonstration tests			
<b>Phase 3</b> IGFC with CO <sub>2</sub> separation and capture								Design/manufacturing/installation			Demonstration tests



Osaki CoolGen Project demonstration test facilities (Osakikamijima-cho, Hiroshima Prefecture)



### Osaki CoolGen Project—Main Achievements and Targets

#### Phase 1: Oxygen-Blown IGCC Demonstration

##### Achievements

##### Steady Progress Toward Zero Emissions

- Achieved 51.9% thermal efficiency (gross efficiency, LHV)
- Higher thermal efficiency than ultra-supercritical (USC) plants<sup>1</sup>
- Data obtained allowed us to estimate thermal efficiency of approximately 57% (gross efficiency, LHV) when these technologies are used with 1,500°C class gas turbines
- Increases in thermal efficiency are expected to lead to a reduction of CO<sub>2</sub> emissions in comparison with USC plants

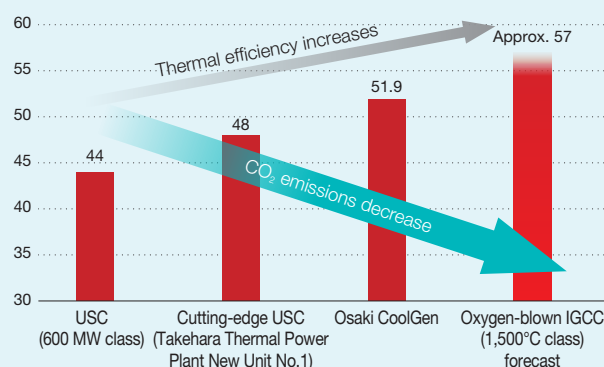
1. Ultra-supercritical (USC): The current cutting-edge technology for pulverized coal-fired power generation (a conventional method of coal-fired thermal power generation in which finely crushed coal is combusted in a boiler)

Note: The graph at right is based on the thermal efficiency values for USC given in BAT reference materials published by the Ministry of Economy, Trade and Industry and Ministry of the Environment about cutting-edge power generation technologies already in use at commercial plants without economic or reliability issues as of January 2020.

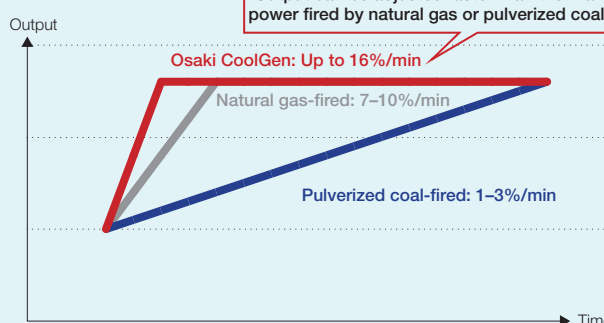
##### Facilitating the Adoption of Renewable Energy

- Achieved load change rate<sup>2</sup> of up to 16% per minute
  - Load change rate surpassing that of natural gas-fired thermal power generation
  - Can be used to balance rapid fluctuations in output from renewables
  - Expected to facilitate the adoption of renewable energy by alleviating instability in the power grid caused by the growing use of renewables
2. Load change rate: Ratio of output change to rated load per minute. A larger load change rate allows quicker output adjustment in response to changes in electricity demand.

#### Gross Thermal Efficiency (LHV) (%)



#### Load Change Rate



#### Phase 2: Oxygen-Blown IGCC with CO<sub>2</sub> Separation and Capture Demonstration

##### Target

- Gather data needed to design a new commercial plant (1,500°C class IGCC) that achieves 90% CO<sub>2</sub> capture while maintaining approximately 52% thermal efficiency (gross efficiency, LHV).
- Capture rate of CO<sub>2</sub> at separation and capture equipment: Over 90%
- Purity of captured CO<sub>2</sub>: Over 99%

#### Phase 3: IGFC with CO<sub>2</sub> Separation and Capture Demonstration

##### Target

- Gather data needed to design a commercial IGFC plant with CO<sub>2</sub> separation and capture (500 MW class) that achieves 90% CO<sub>2</sub> capture and approximately 66% thermal efficiency (gross efficiency, LHV).

### Australian Brown Coal Hydrogen Pilot Test Project (HESC\* Project)

Hydrogen produces no CO<sub>2</sub> when combusted, can be manufactured from a variety of energy sources, and can be stored and transported. By employing CCS technology at the manufacturing stage, hydrogen can be used as a CO<sub>2</sub>-free form of energy. Therefore, for Japan, a nation poor in mineral resources, hydrogen technologies are promising as a means of promoting energy security and combating global warming.

Aiming to build and commercialize a CO<sub>2</sub>-free hydrogen supply chain, J-POWER is participating in a pilot test project to produce hydrogen by gasifying Australian brown coal, an abundant, underutilized resource, and transport it to Japan. Within this project, J-POWER is handling the gasification of the brown coal (sponsored by NEDO) and the purification facilities for the hydrogen gas produced. The pilot test is scheduled to be carried out in 2020.

When this supply chain is commercialized, plans call for utilizing CCS to store the CO<sub>2</sub> produced during the manufacture of hydrogen from brown coal, avoiding its release to the atmosphere and thus achieving CO<sub>2</sub>-free operations.

\* HESC: Hydrogen Energy Supply Chain

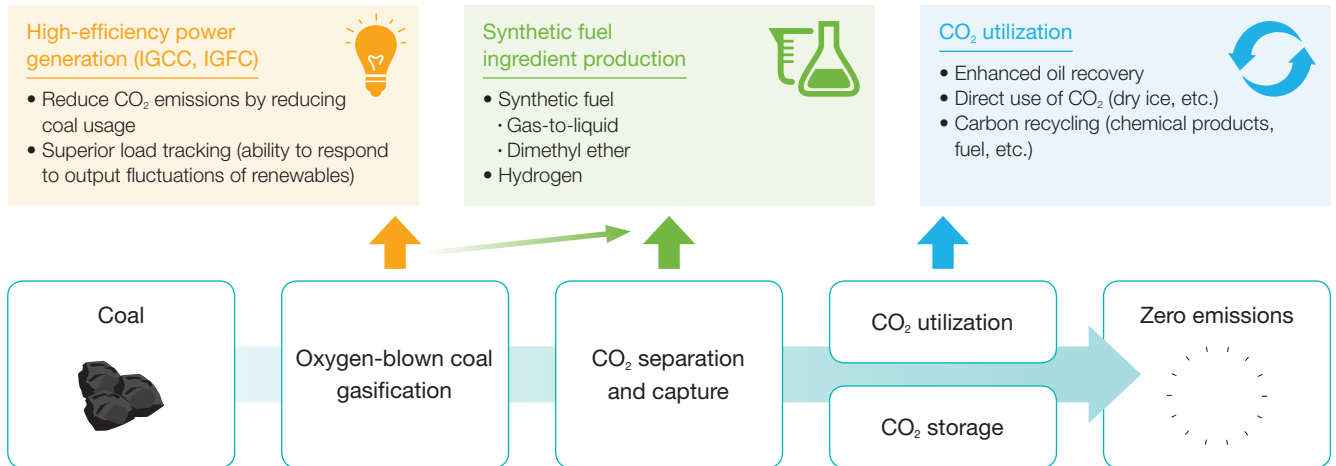


Brown coal gasification furnace facilities under construction

## Achieving both Zero Emissions in Coal Use and Diverse Uses of Coal

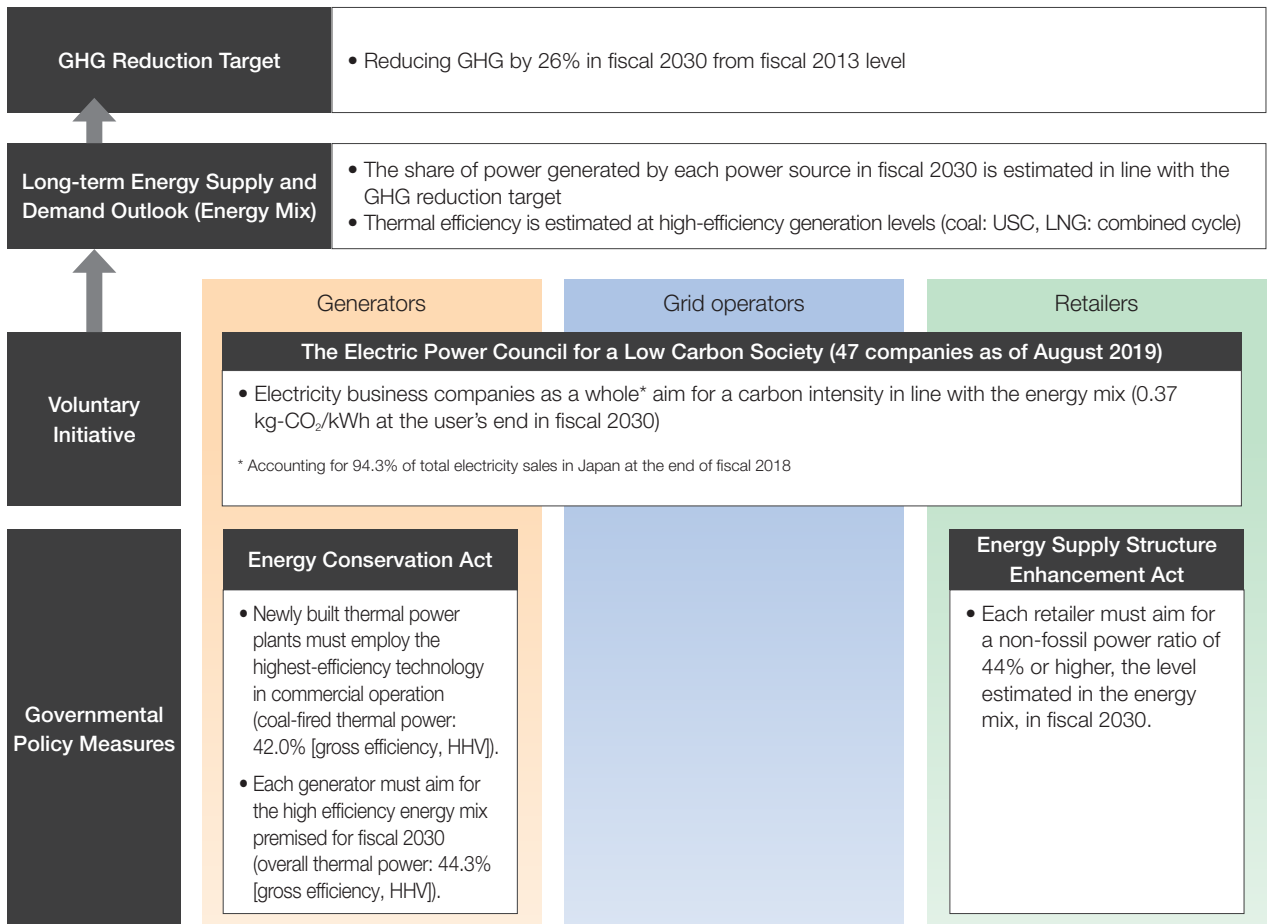
The J-POWER Group is advancing initiatives to achieve zero emissions from coal use. This will not only significantly reduce CO<sub>2</sub> emissions, but enable the use of coal in diverse applications

outside of power generation, achieving zero emissions while more effectively using coal resources.



### Reference: Initiatives to Reduce CO<sub>2</sub> in Japan

As one of Japan's electricity business operators, J-POWER takes part in the Electric Power Council for a Low Carbon Society and is contributing to the achievement of its targets.



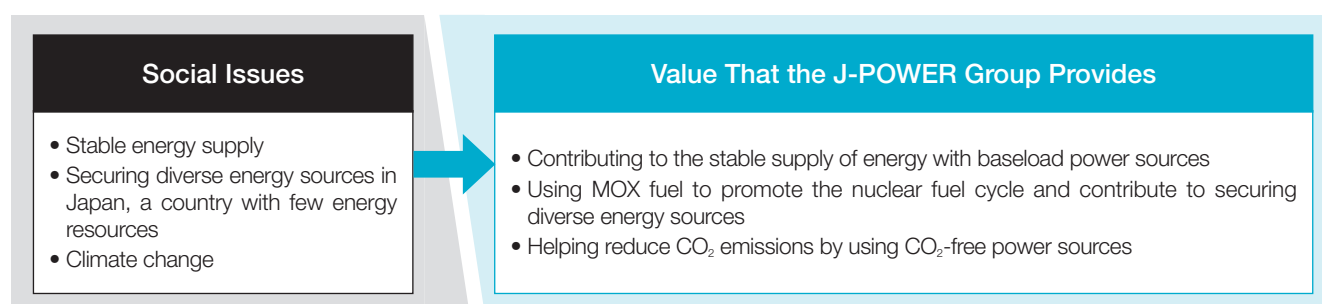
Note: The number of members of the Electric Power Council for a Low Carbon Society and the electricity sales coverage rate given above are from the council's publications.

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

Nuclear power is a quasi-domestically sourced energy source with excellent supply stability, as its fuel, uranium, can be stably procured, and only a small quantity is necessary to fuel a long period of power generation, while spent fuel can be reprocessed and reused as fuel. It thus plays an important part in Japan's power supply. Moreover, as nuclear power emits no CO<sub>2</sub> during power generation, it is an excellent method of power generation in terms of combatting climate change.

J-POWER began construction of the Ohma Nuclear Power Plant in 2008. Later, to confirm compliance with the New Safety Standard for Nuclear Power Stations formulated in light of the accident at the Fukushima Daiichi Nuclear Power Plant, in December 2014 J-POWER submitted an application for permission for alteration of the reactor installment license as well as an application for construction plan approval to the Nuclear Regulation Authority summarizing the details of measures to reinforce the safety of the Ohma Nuclear Power Plant.

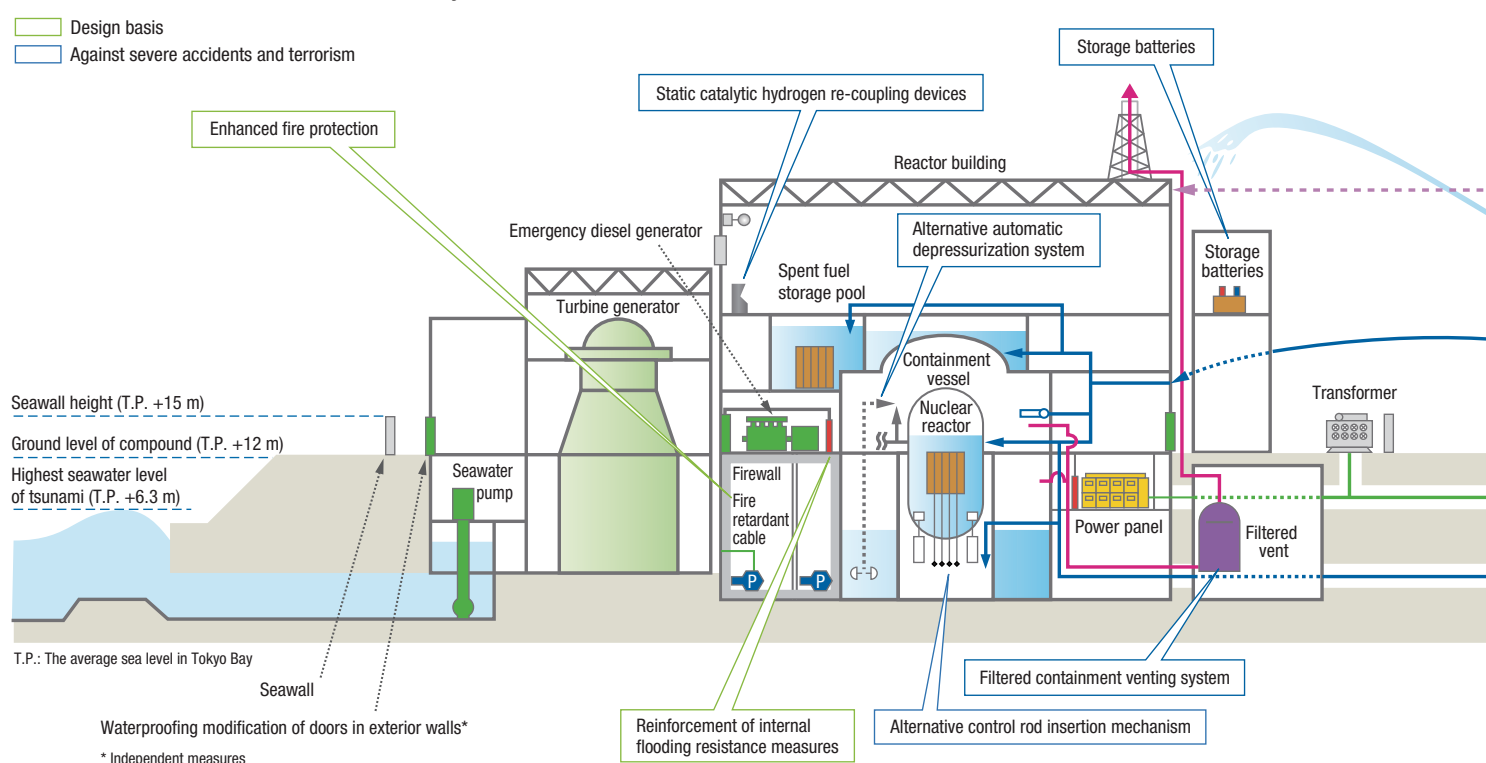
We aim to quickly pass this review and are constantly working to further improve safety as we steadily advance the Ohma Nuclear Power Plant Project.



## Overview of the Ohma Nuclear Power Plant Construction Plans

Location	Ohma-machi, Shimokita-gun, Aomori Prefecture
Capacity	1,383 MW
Type of nuclear reactor	Advanced boiling water reactor (ABWR)
Fuel	Enriched uranium and uranium-plutonium mixed oxide
Start of construction	May 2008
Start of operations	To be determined

## Illustration of Measures to Reinforce Safety at Ohma Nuclear Power Plant



## Ohma Nuclear Power Plant Safety Reinforcement Measures and Review Status

### Akihito Urashima Department Director of Nuclear Power Business

Japan is a nation with few energy resources. For Japan to achieve power supply stability, it is vital to use its available resources as effectively as possible and utilize a balance of diverse power sources. The excellent supply stability of nuclear power makes it an important baseload power source for Japan, and because it emits no CO<sub>2</sub> during power generation, it can contribute to the realization of a zero-emission society. In particular, the Ohma Nuclear Power Plant that J-POWER is working on is notable because it will be able to use entirely MOX fuel, which is produced by reprocessing spent fuel from other plants. By stably using MOX fuel, the Ohma Nuclear Power Plant will improve Japan's plutonium balance and help foster understanding of the peaceful use of plutonium internationally. Taking seriously our role in carrying out Japan's energy policy, the entire Company is working as one to advance this project.

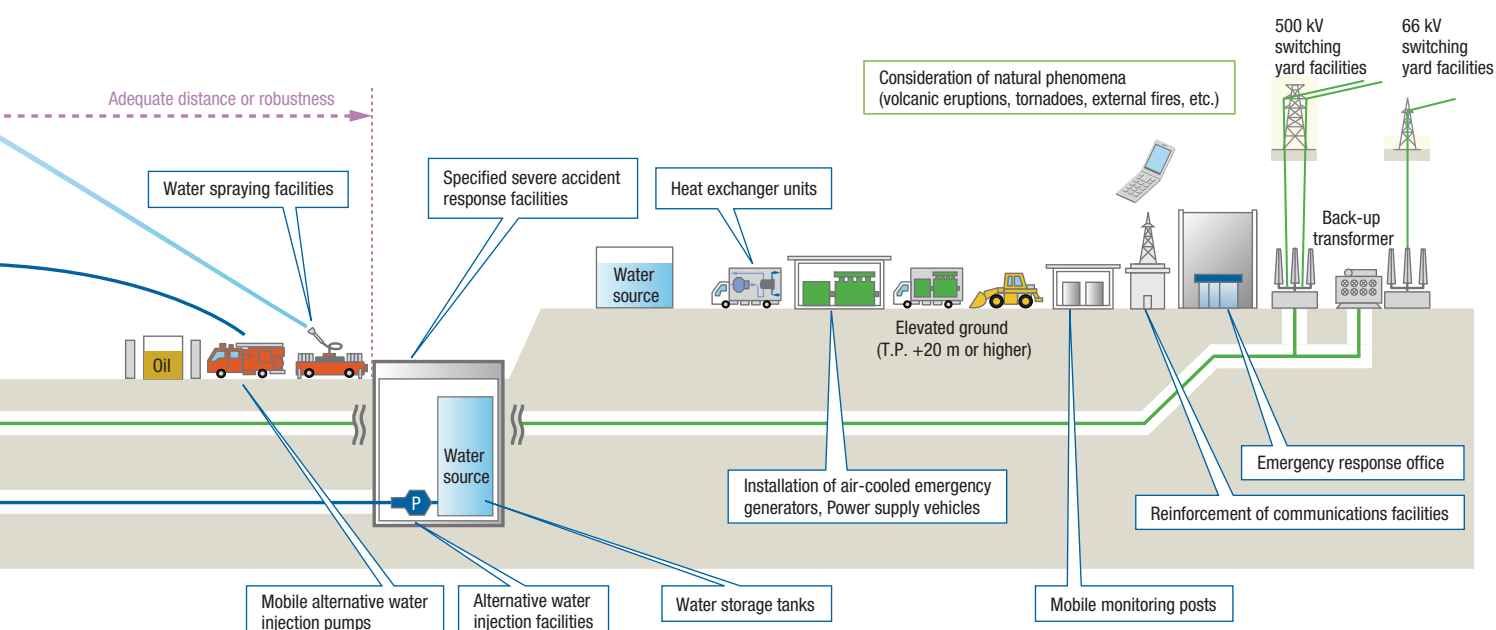
At the same time, it goes without saying that safety is our utmost priority. The New Safety Standards for Nuclear Power Stations, formulated by the Nuclear Regulation Authority in light of the accident at Fukushima Daiichi Nuclear Power Plant, are said to be the strictest safety standards in the world. The Ohma Nuclear Power Plant will incorporate safety reinforcement measures based on lessons learned from Fukushima Daiichi and the New Safety Standards for Nuclear Power Stations. Such measures include the reinforcement of design standards to protect the functionality of plant safety facilities in the event of a tsunami, earthquake or other natural disaster; measures to facilitate rapid response in the event of a serious accident; and countermeasures to major accidents caused by acts of terrorism. In addition to such measures, by implementing voluntary,



ongoing activities to further enhance safety based on the latest data and insights, we will make Ohma Nuclear Power Plant one of the safest power plants in the world in order to contribute to the local community and Japan.

The Nuclear Regulation Authority is currently reviewing the Ohma Nuclear Power Plant's compliance with the New Safety Standards for Nuclear Power Stations. As of March 31, 2020, 36 review meetings have been held, and the impact of earthquakes and tsunamis is the main matter being reviewed. The review process is steadily moving forward, with on-site inspections by the Nuclear Regulation Authority beginning in 2018. After the project clears the review, we will begin construction reflecting the review results. Once construction is completed, we will load the fuel into the reactors, perform test operations, then commence operation of the plant.

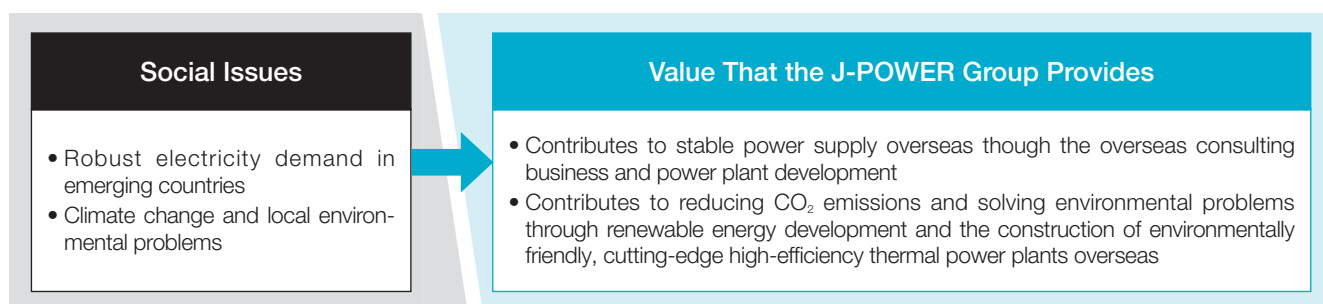
We will continue to engage fully with the review process to ensure that the Ohma Nuclear Power Plant achieves world-class safety.



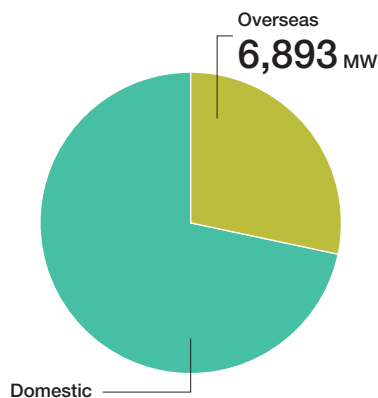
# Exploring New Fields in the Overseas Business

Leveraging its extensive experience and technical know-how in the domestic power business, for more than half a century, the J-POWER Group has engaged in the overseas consulting business in areas related to energy development and electric power transmission and substation facilities around the world. Since our first overseas project in 1962, as of March 31, 2020, we have implemented a total of 361 projects in 64 countries and regions. In more recent decades, amid electricity deregulation around the world, the Company commenced an overseas power generation business that participates in projects by investing capital and technologies in overseas markets where strong demand growth is expected. Leveraging the decades-long relationships of trust with local companies and networks we have built up through the overseas consulting business, we have expanded our participation in overseas projects.

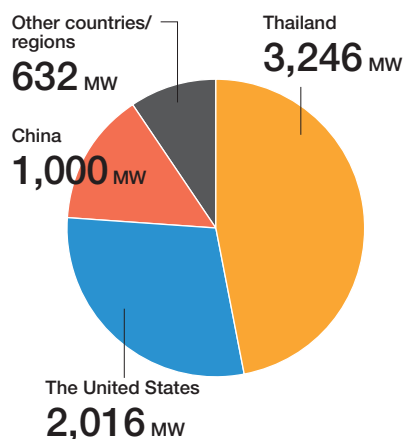
While making maximum use of our strengths in overseas businesses, we will continue working to secure greenfield projects, including renewable energy projects, that support the sustainable growth of the country or region, mainly in Thailand, the United States, and China, where we already have established business platforms, as well as other countries in Asia where energy demand is robust.



The J-POWER Group's Consolidated Power Generation Capacity in Operation (Owned capacity basis)

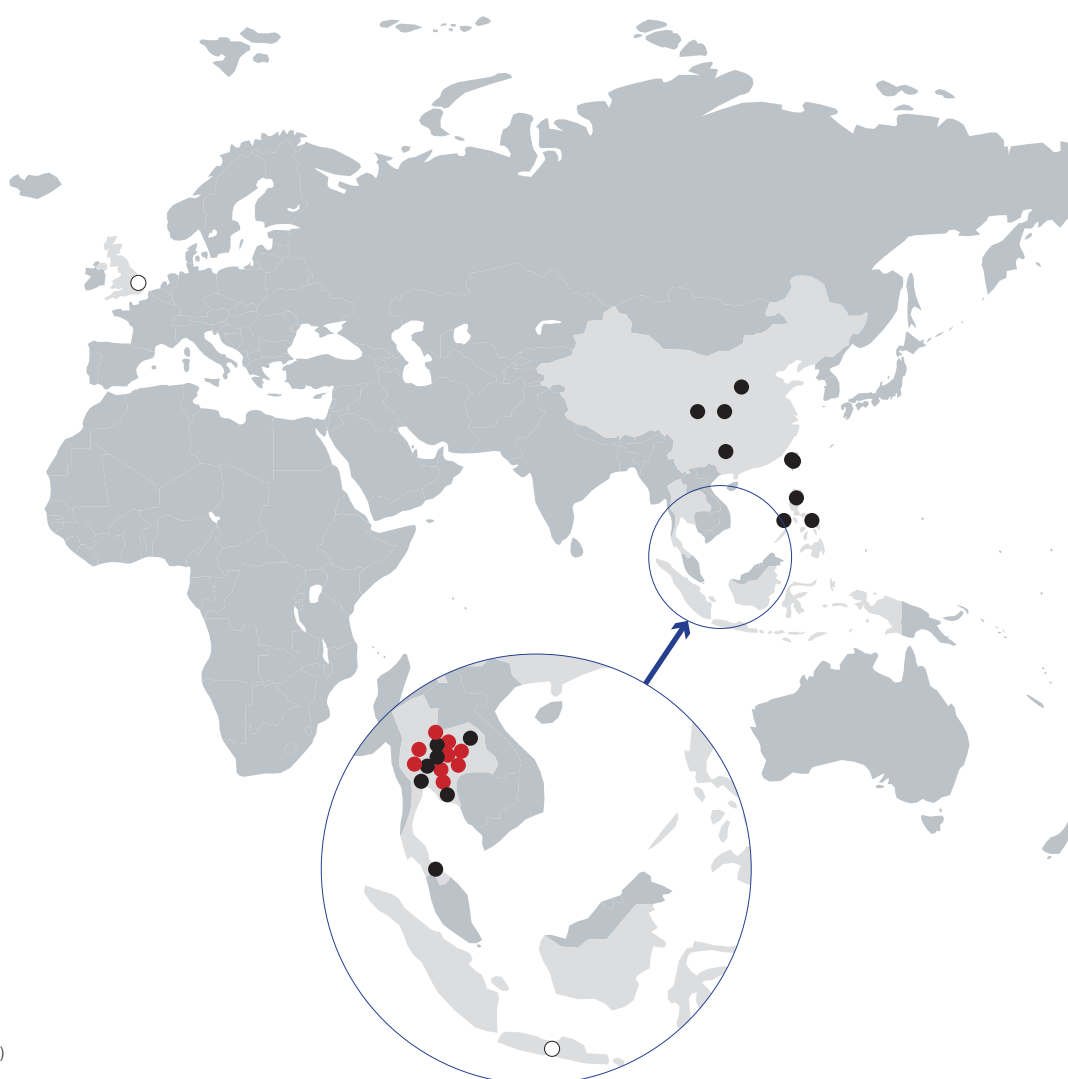


Generation Capacity of Overseas Projects in Operation by Country (Owned capacity basis)



(As of March 31, 2020)

Overseas Power Generation Projects (As of March 31, 2020)





## Overseas Business Strategy Going Forward

### Yoshiki Onoi Department Director of International Business

Building on J-POWER's more than half century of experience in the overseas consulting business, we have gradually expanded the overseas business, shifting the focus from acquiring interests in existing high-quality projects to greenfield development, mainly in Thailand, the United States, China, and other Asian countries. As a result, the Group's overseas owned capacity as of March 31, 2020, stood at approximately 6,893 MW, and segment income for fiscal 2019 came to ¥33.9 billion, approximately 40% of the Group's overall profit.

Looking at the current business environment, the power plant development needs of different countries and regions are diversifying. Countries where electricity deregulation and the adoption of renewable energy are advancing are seeing accelerating structural change in the electric power business. At the same time, the number of thermal power generation projects with long-term PPAs,\* like the projects we have acquired to date, is decreasing, and the business environment is changing greatly. Further growth



in the overseas business will require business strategy that takes these changes in the business environment into account.

J-POWER is leveraging the track record, expertise, and relationships of trust with local businesses that it has built in the overseas business over the years to implement the following initiatives.

First, we will steadily advance the three projects we currently have under construction. These projects come online by 2022 and will raise our overseas owned capacity significantly to nearly 9,000 MW.

Furthermore, we aim to acquire greenfield projects mainly in Asia, where growth in energy demand is expected, and engage in both thermal power generation projects and greenfield renewable energy development in the United States, where we expect considerable business opportunities. By getting involved from the early stages of development, as with the new solar photovoltaic project in the United States, we aim to secure profit as project developer in addition to operator. In regions where the structure of the electric power business is changing, we are exploring opportunities to enter new business areas.

By thus broadening the range of business opportunities in our purview, we aim to expand project acquisition opportunities and secure profitability commensurate with risk, thereby advancing toward the further expansion of the overseas business.

\*PPA: Power purchase agreement. A power sale agreement that specifies in advance the terms of power purchasing, including price and period.



#### Overseas Power Generation Business




● In operation	5 countries/regions	34 projects
● Of which: Majority owned projects	1 country	9 projects
○ Under construction	3 countries	4 projects

### Projects under Construction

We currently have three projects under construction (total capacity of 4,057 MW, or 2,094 MW of owned capacity). First, the Central Java Project, which will be the first high-efficiency coal-fired thermal power plant in Indonesia, is now expected to begin operation several months later than originally planned, but is in the final stages of construction. Second, construction is progressing smoothly on the Triton Knoll Offshore Wind Farm in the United Kingdom, a project in which the Company has been involved from the construction phase onward. Third, construction

on Jackson Power Plant, a combined cycle gas turbine plant in Illinois, in the United States, began in June 2019 and is moving forward in good order.

The Jackson Power Plant is located in the Chicago metropolitan area, a major demand center, and within the PJM market, the largest electricity market in the United States. Because it will be located adjacent to the Elwood Power Plant, in which the Company holds a stake, it will benefit from the Company's extensive knowledge of the market environment.

Project	Overview	Location
<b>Central Java (Indonesia)</b>  Capacity: 2,000 MW (1,000 MW x 2) Type: Coal-fired thermal (ultra-supercritical (USC)) Ownership: 34% Status: Under construction Start of operation: Fiscal 2020	<ul style="list-style-type: none"> <li>• An IPP project (greenfield coal-fired thermal power project) won by tender in international competitive bidding in 2011</li> <li>• Building a high-efficiency coal-fired thermal power plant in Batang, Central Java Province, Indonesia</li> <li>• Will sell electricity to Indonesia's state-owned electricity company for 25 years from the commencement of operation</li> </ul>	
<b>Triton Knoll (The United Kingdom)</b>  Capacity: 857 MW Type: Offshore wind Ownership: 25% Status: Under construction Start of operation: 2021	<ul style="list-style-type: none"> <li>• Participating in an overseas offshore wind power generation project from the construction stage</li> <li>• Power sale price guaranteed for 15 years under the UK's CfD scheme<sup>1</sup></li> <li>• The offshore wind power generation business expertise gained from participation in this project will help accelerate the renewable energy business in Japan and overseas</li> </ul>	
<b>Jackson (The United States)</b>  Capacity 1,200 MW Type: CCGT <sup>2</sup> Ownership: 100% Status: Under construction Start of operation: 2022	<ul style="list-style-type: none"> <li>• Decided to construct a power plant adjacent to the existing Elwood Power Plant in June 2019</li> <li>• Greenfield project</li> <li>• Near the major demand center of metropolitan Chicago</li> <li>• Will sell power in the PJM market</li> </ul>	

1. CfD (Contract for difference): An investment incentive system for wind and other low-carbon power sources in the U.K. in which a qualified power generator forms an agreement with the Low Carbon Contracts Company (LCCC), the CfD contract management company owned by the U.K. government, for an applicable project. Under such agreement, any difference between a reference price specified in the agreement and the wholesale market price is settled between the two parties.

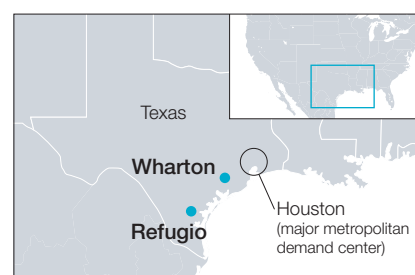
2. CCGT (Combined cycle gas turbine): A combined cycle generating system that uses a gas turbine and a steam turbine driven by the exhaust gas from the gas turbine.

Note: The impact of the novel coronavirus pandemic on these projects is currently under review

### Start of Development on J-POWER's First Solar Photovoltaic Project in the United States

J-POWER's U.S. subsidiary partnered with solar photovoltaic developer AP Solar to begin development of a large-scale solar photovoltaic project in Texas (Wharton: generating capacity of 350 MW (AC)) in March 2020, followed by a second project (Refugio: generating capacity of 400 MW (AC)) in August 2020. Texas offers excellent solar resources, and electricity demand there is expected to see especially strong growth. As such, the state has seen an increase in solar power development in recent years. This project also offers the advantage of being located near Houston, a major power demand center.

Going forward, J-POWER will continue working to further expand renewables and other overseas power generation projects.



Location	Generating Capacity	Start of Construction	Start of Operation
Wharton, approximately 60 km southwest of Houston	350 MW (AC)	Late 2020	First half of 2022
Refugio, approximately 200 km southwest of Houston	400 MW (AC)	Second half of 2021	2023

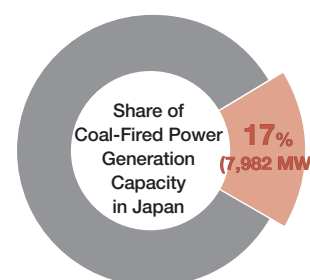
# Thermal Power Business

Providing an economical and stable baseload source of electricity, the J-POWER Group's coal-fired thermal power plants maintain high load factors and consistently clear strict standards limiting emissions of environmentally harmful substances, such as SOx and NOx.

We see reducing CO<sub>2</sub> emissions from coal use as a materiality for management. Since launching initiatives related to the mixed combustion of biomass fuels in coal-fired thermal power generation in 2003, we have contributed to the reduction of CO<sub>2</sub> emissions. Going forward, we will reinforce larger-scale mixed combustion initiatives. Furthermore, we are pursuing research and development aimed at realizing zero emissions from coal use.

While taking steps to address climate change and other environmental problems, the Company will continue to utilize economical and stable coal, thereby contributing to the stable supply of electricity in Japan.

Note: For details on initiatives to achieve zero emissions from fossil fuel power generation, please refer to pages 26–29.



Sources: Compiled from Surveys and Statistics of Electricity (Agency for Natural Resources and Energy)  
Note: Owned capacity basis, as of March 31, 2020

## Social Issues

- Stable supply of power in light of Japan's low energy self-sufficiency rate
- Climate change and other environmental problems

## Value That the J-POWER Group Provides

- Contributes to the stable supply of power in Japan as an economical and stable baseload power source
- Reduces CO<sub>2</sub> emission through mixed combustion with biomass fuels and advances R&D aimed at achieving zero emissions in coal use
- Uses high-efficiency, environmentally friendly coal-fired thermal power to reduce environmental impact

## Replacement and New Capacity Projects

The Takehara Thermal Power Plant New Unit No. 1 began operation in June 2020. This cutting-edge coal-fired thermal power plant replaced the old No. 1 and No. 2 units at the same 600 MW capacity. The new plant achieves thermal efficiency of approximately 48%, an improvement from the approximately 41% and 38% of the former No. 1 and No. 2 units, respectively.\* As a result, CO<sub>2</sub> emissions per unit of power generated have been reduced by approximately 20%. In addition, by aiming for a mixed combustion rate of 10% biomass fuels, we will reduce the amount of coal the plant uses, further cutting net carbon emissions.

In addition, the Kashima Power Co., Ltd. Kashima Thermal Power Plant Unit No. 2, in which J-POWER holds a 50% stake, commenced operation in July 2020. The electricity generated by

the unit is being purchased for resale by NIPPON STEEL CORPORATION and J-POWER in proportion to their equity stakes.

The power generated by these two high-efficiency, highly competitive, cutting-edge thermal power plants will be sold broadly to the former EPCOs and on electricity markets, contributing to revenue expansion.

Regarding the Yamaguchi Ube Power project, in April 2019, we announced that we are considering scaling down the project to a single 600 MW-class ultra-supercritical plant or altering the plan to develop a commercial oxygen-blown IGCC plant. We will advance considerations to formulate a power station plan best suited to the conditions of this project.

\* Generating end, lower heating values (LHV)

### Takehara Thermal Power Plant New Unit No. 1 (Replacement)

Location	Takehara City, Hiroshima Prefecture
Type	Coal-fired thermal power
Start of operations	June 2020
Capacity	600 MW → 600 MW (Replacement at the same capacity)
Steam conditions	Sub-critical → Ultra-supercritical (USC)



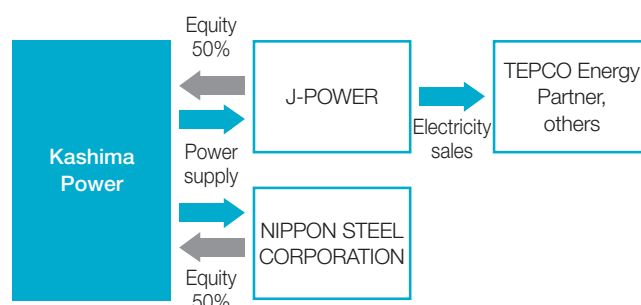
Takehara Thermal Power Plant New Unit No. 1

### Yamaguchi Ube Power (New Capacity)

Location	Ube City, Yamaguchi Prefecture
Status	Changes in plan under review

### Kashima Power Co., Ltd. Kashima Thermal Power Plant Unit No. 2

Location	Kashima City, Ibaraki Prefecture
Type	Coal-fired thermal power
Start of operations	July 2020
Capacity	645 MW (Owned capacity: 323 MW)
Steam conditions	Ultra-supercritical (USC)



# Transmission Business

The J-POWER Group is an electricity transmission utility that owns and operates approximately 2,400 km of transmission lines and nine substations and converter stations throughout Japan. The Company provides sections of the grids of the electric power companies and connects them to one another, fulfilling a major role in the nationwide operation of Japan's overall power grid.

In particular, we operate critical facilities that support wide-area power interchange in Japan, such as interconnection lines (Hokkaido-Honshu HVDC Interconnection Line, Honshu-Shikoku Interconnection Line, Kii Channel HVDC Interconnection Line and Kanmon Interconnection Line) connecting Honshu with Hokkaido, Shikoku, and Kyushu as well as the Sakuma Frequency Converter Station, which connects the different frequencies of eastern Japan (50 Hz) and western Japan (60 Hz).

Going forward, J-POWER will continue to maintain the reliability of facilities and focus efforts on ensuring stable operations, thereby contributing to the stable supply of power in Japan.

## Social Issues

- Expansion of renewable energy
- Securing resilience in light of increasingly damaging natural disasters
- Stable power supply over broad areas of Japan

## Value That the J-POWER Group Provides

- The Group's trunk transmission lines that connect regions, interconnecting line facilities, and frequency converter station that links eastern and western Japan contribute to the operation of Japan's broad-area power network
- Improves the reliability of electric power transmission and substation facilities through resilience enforcement and facility aging countermeasures

## Corporate Spin-Off of Transmission and Transformation Divisions

In accordance with the legal unbundling of transmission businesses required under the Electricity Business Act, on April 1, 2019, J-POWER established a wholly owned subsidiary for the purpose of spinning off its transmission and transformation divisions to secure their greater neutrality. On April 1, 2020, this subsidiary changed its name to J-POWER Transmission Network Co., Ltd. (J-POWER Transmission) and took over J-POWER's former transmission business.

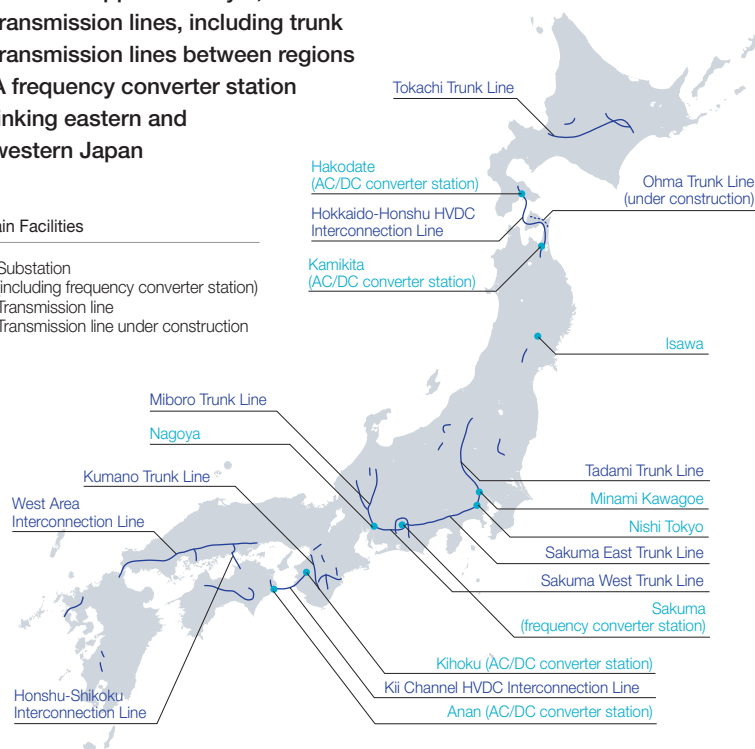
As an electricity transmission utility, J-POWER Transmission will be responsible for the stable operation of electric power transmission and substation facilities and the development of the cross-regional network going forward. The company will fully leverage its electric power transmission and substation facilities and human resources as it continues to transmit power.



- A total of approximately 2,400 km of transmission lines, including trunk transmission lines between regions
- A frequency converter station linking eastern and western Japan

### Main Facilities

- Substation (including frequency converter station)
- Transmission line
- Transmission line under construction



## Plan to Increase the Capacity of the Sakuma Frequency Converter Station

In June 2016, the Organization for Cross-regional Coordination of Transmission Operators published its Cross-regional Network Development Plan, which includes plans to increase the capacity of the Sakuma Frequency Converter Station. The J-POWER Group was chosen to implement this plan (the project has now been

transferred to J-POWER Transmission). Accordingly, in line with government policy requirements and the purpose of the plan—to ensure the stable supply of electric power—the Company is advancing detailed examinations in preparation for construction.

Initiative	Capacity	Remarks
Construction of the New Sakuma Frequency Converter Station and replacement and expansion of related transmission lines	New Sakuma Frequency Converter Station: 300 MW Sakuma East Trunk Line: Approx. 125 km Sakuma West Trunk Line: Approx. 14 km	Undergoing research and surveying Expansion scheduled for completion at the end of fiscal 2027

# Electric Power-Related Business

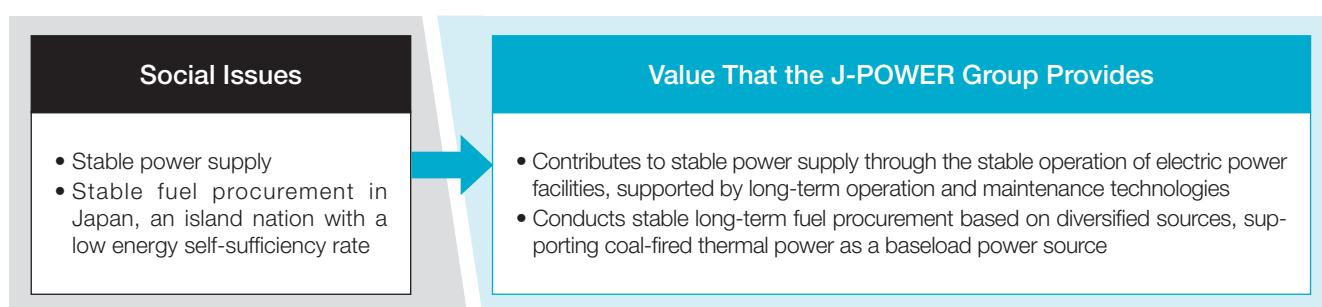
The J-POWER Group operates support businesses that facilitate the smooth and efficient implementation of its electric power business. These businesses are essential to the operation of facilities related to the electric power business and include the design, construction, inspection, and maintenance of said facilities as the harbor transport of fuel and coal ash and the import and transport of coal.

## Coal Procurement

The J-POWER Group procures fuel coal primarily from Australia and Indonesia. In Australia, the Company owns interests in three coal mining projects through a subsidiary.

Global supply and demand in the coal market can vary greatly due to demand from developing countries, including China and India, trends related to energy resources other than coal, such as

liquefied natural gas (LNG), and other geopolitical factors. In view of this, the Company maintains an upstream presence, namely, the ownership of coal mines, and secures diversified procurement sources, thereby ensuring the stable procurement of coal as fuel for thermal power generation over the long term.



**Mines in Which J-POWER Holds Interests** (As of March 31, 2020)



**Coal Mining Projects** (As of March 31, 2020)

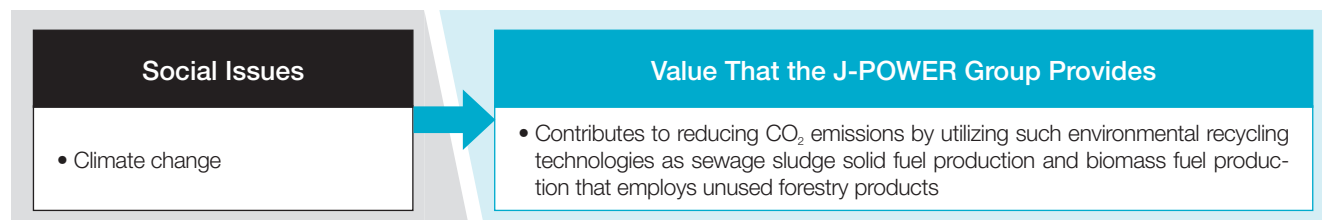
Mine Name	Location	Loading Port	2019 Sales Volume	Investment Ratio*	Beginning of Commercial Production
Clermont	Queensland	Dalrymple Bay	11.39 million t	22.2%	2010
Narrabri	New South Wales	Newcastle	5.68 million t	7.5%	2012
Maules Creek	New South Wales	Newcastle	8.93 million t	10%	2014

\* Investment through a subsidiary, J-POWER AUSTRALIA PTY. LTD.



## Other Business

Aiming to fully utilize the management resources and know-how at its disposal, the J-POWER Group operates multifaceted businesses, including environment-related businesses involving the production of carbonized fuel from sewage sludge for use as biomass fuel at coal-fired thermal power plants. In addition, the Company is active in innovative power businesses, such as waste power generation and cogeneration systems, and provides technical consulting services in Japan.



### Examples of Biomass Fuels

Sewage sludge fuel



Wood pellets



### Main Projects under Other Business (As of March 31, 2020)

Project Name	Location	Business	Ownership	Year Operation Commenced
Miyazaki Wood Pellet Project	Miyazaki Prefecture	Demonstration business of an integrated system from the construction of manufacturing facilities to the production of wood pellets from unused forest offcuts and their use in mixed combustion in J-POWER's coal-fired thermal power plants (Pellet production capacity: 25,000 t/year)	98.3%	2011
Osaka City Hirano Sewage Treatment Plant/Sludge Solid Fuel Project	Osaka Prefecture	Integrated PFI-type <sup>1</sup> sewage sludge-based biofuel recycling project, from the construction of biofuel manufacturing facilities to mixed combustion in J-POWER's coal-fired thermal power plants and others (Sludge processing capacity: 150 t/day)	60%	2014
Omuta Waste-Fueled Power Plant	Fukuoka Prefecture	Recycling power generation using solid refuse derived fuel (RDF) made by compressing and forming general waste (Generating capacity: 20.6 MW, RDF processing capacity: 315 t/day)	45.2%	2002
Mikasagawa-Nakagawa Regional Sewerage/Mikasagawa Sewage Treatment Plant/Sewage Sludge Solid Fuel Project	Fukuoka Prefecture	Integrated DBO-type <sup>2</sup> sewage sludge-based biofuel recycling project, from the construction of biofuel manufacturing facilities to mixed combustion in J-POWER's coal-fired thermal power plants and others (Sludge processing capacity: 100 t/day)	44%	2019

5 other projects

1. PFI (Private Finance Initiative): A method of conducting public-sector projects from construction through the operating stages by drawing on private-sector funding, management know-how, technology, and other resources

2. DBO (Design, Build, Operate): A system whereby the public sector finances projects and then commissions the private sector to undertake their design, building, and operation

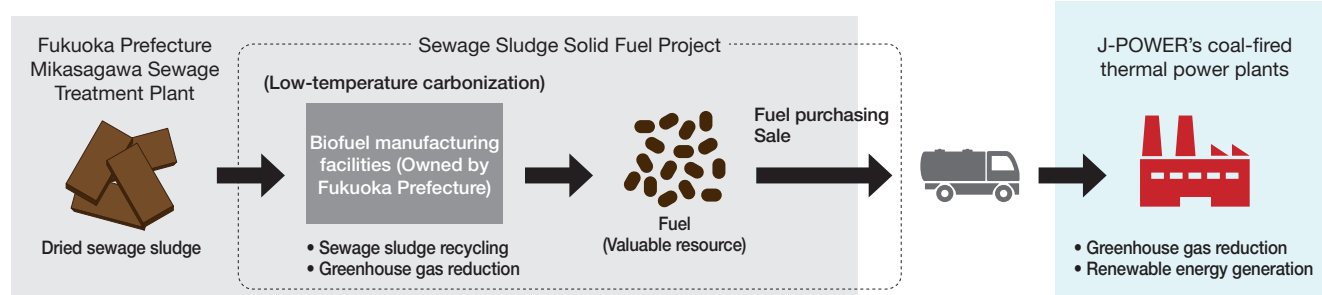
## 2019 Initiatives

J-POWER, Tsukishima Kikai Co., Ltd., and Mikasa Co., Ltd. jointly formed an agreement with Fukuoka Prefecture to conduct the Mikasagawa-Nakagawa Regional Sewerage/Mikasagawa Sewage Treatment Plant/Sewage Sludge Solid Fuel Project. The sewage

sludge-based fuel manufacturing facilities constructed and prepared under this agreement began operation in April 2019.

The fuel produced at these facilities will be used in mixed combustion at J-POWER's coal-fired thermal power plants.

### Business Overview





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## The J-POWER Group's Environmental Initiatives

Based on our Corporate Philosophy—"We will meet people's needs for energy without fail, and play our part for the sustainable development of Japan and the rest of the world"—the J-POWER Group engages in business conduct aimed at harmonizing energy supply and the environment. Specifically, under our Corporate Conduct Rules and the J-POWER Group Environmental Management Vision, we regard contribution to the reduction of CO<sub>2</sub> emissions on a global scale and the preservation of local environments as important issues.

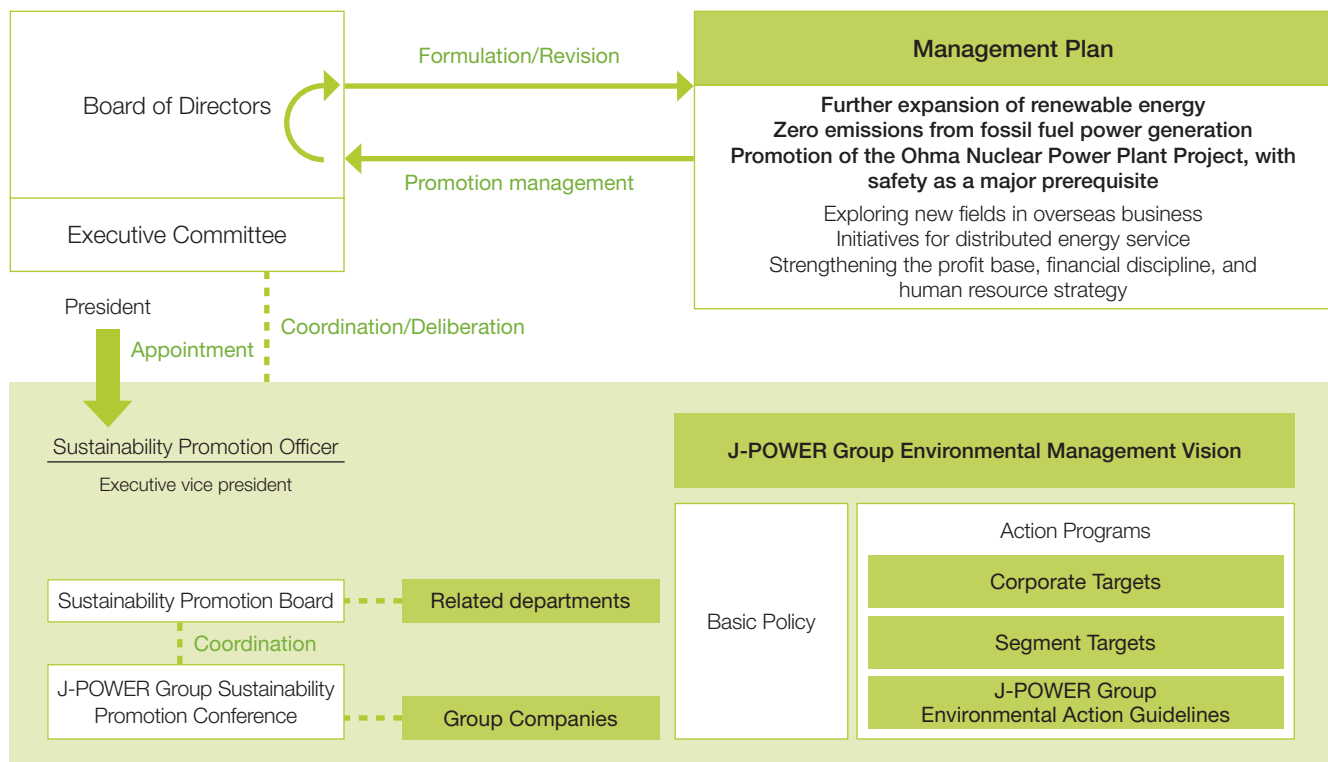
The J-POWER Group is implementing a medium-term management plan for the period leading up to 2025. Initiatives going forward under this plan include the expansion of renewable energy and achieving zero emissions from fossil fuel power generation as well as the promotion of the Ohma Nuclear Power Plant Project with safety as a major prerequisite.

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

### Sustainability Promotion Structures

Appointed by the president, the Executive Vice President in charge of sustainability is responsible for environmental initiatives. We have established the Sustainability Promotion Board and the J-POWER Group Sustainability Promotion Conference to promote sustainability, including environmental initiatives.

#### Environmental Initiatives



## J-POWER Group Environmental Management Vision

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

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

\* Executive Committee: Please refer to page 55.



### J-POWER Group Environmental Management Vision Basic Policy (Revised on May 14, 2020)

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

##### Basic Stance

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

##### Addressing Global Environmental Issues

In addition to doing our utmost to ensure a stable energy supply, we will steadily advance initiatives toward the realization of zero emissions power supply both domestically and internationally and will contribute to the reduction of CO<sub>2</sub> emissions on a global scale.

To that end, aiming to expand CO<sub>2</sub>-free power sources and achieve zero emissions from fossil fuel power generation by such means as the capture, utilization, and storage of CO<sub>2</sub> emitted from the combustion of fossil fuels, we will work from medium- and long-term perspectives, with technology as our central focus, to realize a stable energy supply and reduction in CO<sub>2</sub> emissions domestically and internationally.

##### Addressing Local Environmental Issues

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

##### Ensuring Transparency and Reliability

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

## The J-POWER Group's Environmental Initiatives

### Corporate Targets and 2019 Achievements

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

The Corporate Targets and initiatives conducted in fiscal 2019 are as follows.

	Item	Target		
Addressing Global Environmental Issues	Promoting technological development to reduce carbon emissions and achieve zero emissions from power generation	Steadily implement the following measures aimed at realizing a low-carbon society as well as contribute to the stable supply of energy and reduction of CO <sub>2</sub> emissions in Japan and around the world by achieving the targets of the Electric Power Council for a Low Carbon Society's Action Plan for Achieving a Low-Carbon Society.		
		<b>1. Expansion of renewable energy</b>		
		<ul style="list-style-type: none"> <li>Advance the new installation, upgrading, and equipment replacement of hydroelectric power plants in order to expand the use of hydroelectric power.</li> </ul>		
		<ul style="list-style-type: none"> <li>Work to significantly expand wind power facilities, including offshore wind power generation.</li> </ul>		
		<ul style="list-style-type: none"> <li>Work to develop new geothermal power projects in Japan.</li> </ul>		
		<b>2. Strive toward carbon reduction and zero emissions in coal use</b>		
		<ul style="list-style-type: none"> <li>Advance the development of high-efficiency integrated coal gasification combined cycle (IGCC) technology with the aim of bringing it to practical use. Advance research and development of CO<sub>2</sub> capture, utilization and storage (CCUS) technology.</li> </ul>		
		<ul style="list-style-type: none"> <li>Work to replace aging coal-fired thermal power plants with the world's leading high-efficiency coal-fired thermal power plants.</li> </ul>		
		<ul style="list-style-type: none"> <li>Promote the mixed combustion of biomass fuels in coal-fired thermal power plants (effective exploitation of untapped resources).</li> </ul>		
		<ul style="list-style-type: none"> <li>Contribute to the reduction of global CO<sub>2</sub> emissions and the adoption of advanced technologies by expanding the coal-fired thermal power generation business using J-POWER's advanced, high-efficiency power generation technologies, especially in Asia.</li> </ul>		
Addressing Local Environmental Issues	Promoting technological development to reduce carbon emissions and achieve zero emissions from power generation	<b>3. Promotion of the Ohma Nuclear Power Plant Project, with safety as a major prerequisite</b>		
		<ul style="list-style-type: none"> <li>Advance construction of the Ohma Nuclear Power Plant, giving highest priority to safety and working to ensure the trust of the local community.</li> </ul>		
		<b>Item</b>	<b>Target</b>	<b>Fiscal 2018 Performance</b>
		Maintaining and improving thermal efficiency for thermal power (higher heating value (HHV) basis)	Maintain current level [about 40%]	40.6% (Reference: LHV* = 41.6%)
		Reduction of sulfur hexafluoride (SF <sub>6</sub> ) emissions; gas recovery rate during inspection and retirement of equipment	Inspection: at least 97% Retirement: at least 99%	Inspection: 99.1% Retirement: 99.3%
		Reducing sulfur oxide (SO <sub>x</sub> ) emissions per unit of electric power generated by thermal power	Maintain current level [about 0.2 g/kWh]	0.21 g/kWh
		Reducing nitrogen oxide (NO <sub>x</sub> ) emissions per unit of electric power generated by thermal power	Maintain current level [about 0.5 g/kWh]	0.51 g/kWh
		Increasing the recycling rate for industrial waste	Maintain current level [about 97%]	98.8%
		Preservation of aquatic environments	Consider the protection of river and ocean environments in business activities	Practiced consideration for the protection of river and ocean environments
		Preservation of biodiversity	Consider the protection of biodiversity in business activities	Practiced consideration for biodiversity
Ensuring Transparency and Reliability	Improvement of environment management level	Continual improvement of EMS		Consistently implemented the PDCA cycle

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



## Main Fiscal 2019 Initiatives

	With regard to the expansion of hydroelectric power utilization, we began construction on the Shinkatsurazawa Hydroelectric Power Plant Project and the Ashoro Hydroelectric Power Plant Repowering Project in April 2019.
	<p>In onshore wind power, in January 2020 we started operations at the Setana-Osato Wind Farm and Nikaho No. 2 Wind Farm. In addition, we advanced construction of the Kuzumaki No. 2 Wind Farm and Kaminokuni No. 2 Wind Farm as well as construction preparations for the Tomamae and Shimamaki replacement projects and the Minami Ehime No. 2 project.</p> <p>In offshore wind power, we are advancing business studies related to the Hibikinada Offshore Wind Farm. We also started development surveys for the Hiyama, Awara, and Saikai projects.</p> <p>In the overseas wind power business, in August 2018, we acquired a stake in the Triton Knoll Offshore Wind Power Project in the U.K., and construction of this project advanced.</p>
	<p>Looking at the development of new geothermal power projects in Japan, we started operations of the Wasabizawa Geothermal Power Plant in May 2019. We also started construction of the Appi Geothermal Power Plant in August 2019. In addition, at the Takahinatayama site in Osaki City, Miyagi Prefecture, in July 2019 we began small caliber well drilling surveys aimed at future geothermal power plant development.</p> <p>Furthermore, having shut down the Onikobe Geothermal Power Plant's existing facilities in April 2017, we began the construction of facility replacement in April 2019.</p>
	At the Osaki CoolGen Project, we completed demonstration tests of oxygen-blown IGCC (Phase 1) in February 2019 and began demonstration tests of oxygen-blown IGCC with CO <sub>2</sub> separation and capture (Phase 2) in December 2019. We also started construction preparations for demonstration tests of IGFC with CO <sub>2</sub> separation and capture (Phase 3).
	Construction of the Takehara Thermal Power Plant Replacement Project progressed toward its June 2020 start of operations.
	<p>At the Matsuura Thermal Power Plant, Takehara Thermal Power Plant, and Takasago Thermal Power Plant, we implemented mixed combustion using domestically-sourced biomass fuels (such as wood pellets and dried sewage sludge).</p> <p>To make effective use of unused wood and other materials from wooded areas in Japan, we advanced preparations toward 2021 for commercialization of wood pellets manufacturing and sales through SJ Wood Pellet Co., Ltd., which was jointly established with another company.</p>
	In Indonesia, we advanced the construction of the Central Java Project toward a planned start of operations in fiscal 2020.
	For the Ohma Nuclear Power Plant Project, we carried out studies for safety enhancement measures and responded to the review of compliance with the new safety standards. We also implemented initiatives to gain the understanding and trust of local residents.

### Fiscal 2019 Performance

### Fiscal 2019 Performance Evaluation

	40.8% (Reference: LHV* = 41.9%)	The J-POWER Group met its target for total thermal efficiency for thermal power thanks to efforts at existing thermal power plants to maintain high-efficiency operations and to adopt high-efficiency technologies when renovating facilities.
	Inspection: 99.9% Retirement: 99.3%	The target was met, with a recovery rate of 99.9% during inspections and 99.3% at retirement, thanks to efforts to curb emissions during equipment inspection through sound recovery and reuse.
	0.22 g/kWh	As a result of efforts including fuel management and the appropriate operation of flue gas desulfurization systems, we curbed our SOx emissions and achieved our target for emissions per unit of electric power generated.
	0.50 g/kWh	As a result of efforts including fuel management, combustion management and the appropriate operation of flue gas denitrification systems, we curbed our NOx emissions and achieved our target for emissions per unit of electric power generated.
	99.3%	We achieved our targets through efforts to promote the recycling of coal ash and to reduce industrial waste generated by the maintenance and operation of power plants.
	Practiced consideration for the protection of river and ocean environments	<p>At operating power generation facilities that are involved with rivers, we implemented measures for the protection of the river environment appropriate to the conditions at each location. These included the implementation of sedimentation disposal measures and measures to mitigate the long-term persistence of turbidity.</p> <p>At operating power generation facilities that adjoin the ocean, we implemented precise control over effluent in compliance with environmental protection agreements and other such arrangements.</p>
	Practiced consideration for biodiversity	We showed consideration for the protection of ecosystems and the diversity of species in conducting our business activities and worked to protect rare animal and plant species and their habitats.
	Consistently implemented the PDCA cycle	We implemented the PDCA cycle consistently and worked to raise the level of environmental management.

## The J-POWER Group's Environmental Initiatives

### Addressing Global Environmental Issues

The J-POWER Group's main businesses are its domestic and overseas electric power generation businesses. Accordingly, addressing global environmental problems, especially climate change, is an extremely large factor in our management strategy.

Over the long-term, the J-POWER Group aims to provide a zero emission power supply and contribute to both global economic development and efforts to address climate change. We are implementing a variety of initiatives to this end.

For information on specific initiatives, please refer to the following pages about management strategy.

- ▶ Further expansion of renewable energy pp. 22–25
- ▶ Zero emissions from fossil fuel power generation pp. 26–29
- ▶ Promotion of the ohma nuclear power plant project, with safety as a major prerequisite pp. 30–31

### Addressing Local Environmental Issues

The J-POWER Group seeks to reduce emissions of environmentally harmful substances, such as sulfur oxides (SOx), nitrogen oxides (NOx), soot and dust; to conserve resources; and to reduce waste.

Furthermore, aiming to promote environmental conservation, we take the natural environment into account at every stage of our businesses and give consideration to aquatic environments and biodiversity.

### Reducing Emissions of Environmentally Harmful Substances

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

#### Measures to Prevent Air Pollution at Coal-Fired Thermal Power Plants

To eliminate emissions of SOx, NOx, soot, and dust at thermal power plants and other such facilities, we take such measures as improving combustion methods and always making appropriate use of such flue gas treatment equipment as desulfurization and denitrification systems and electrostatic precipitators. In this way, we achieve highly efficient pollutant reduction. This equipment operates automatically with the aid of measurement devices that continuously monitor the content of flue gas. In addition, human operators monitor the equipment 24 hours a day and are able to mount a swift response in the event of any abnormality, ensuring that our emissions do not exceed the benchmark figures specified by the Air Pollution Control Act and environmental protection agreements.

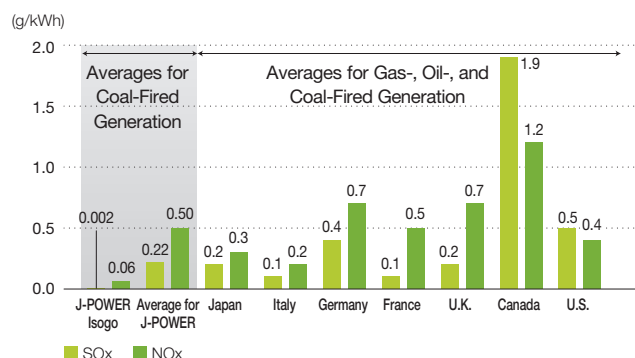
Our fiscal 2019 performance regarding SOx, NOx, and soot and dust emissions is shown in the below table. The figures obtained are quite low by international standards.

#### Fiscal 2019 SOx, NOx, and Soot and Dust Emissions

Substance	Emissions	Emissions Intensity <sup>1</sup>
SOx	11.9 thousand tons	0.22 g/kWh
NOx	27.5 thousand tons	0.50 g/kWh
Soot and dust <sup>2</sup>	0.6 thousand tons	0.01 g/kWh

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

#### International Comparison of SOx and NOx Emissions Intensity for Thermal Generation



Notes: 1. Emissions: OECD StatExtracts

Power generated: IEA "Energy Balances of OECD Countries 2019 Edition"

2. J-POWER and Isogo figures are fiscal 2019 results.

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

#### Maintaining and Improving the Industrial Waste Recycling Rate

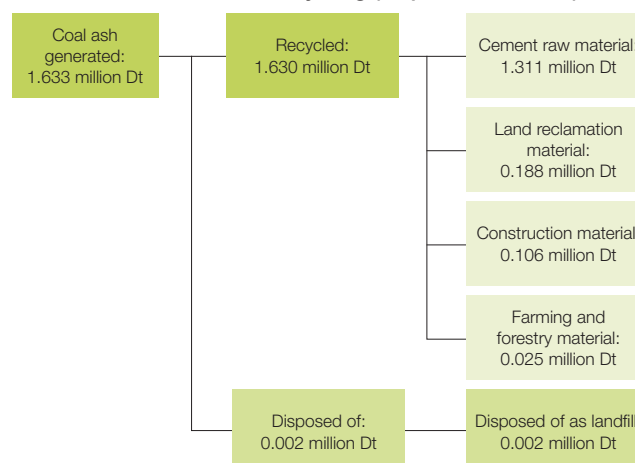
The J-POWER Group's target industrial waste recycling rate is 97%. The total amount of industrial waste we generated in fiscal 2019 was 2.00 million tons, and we achieved a recycling rate of 99.3%.

#### Making Effective Use of Coal Ash and Gypsum

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

We recycle 99.8% of coal ash produced in coal-fired thermal power generation, mainly as material for making cement and for land reclamation, as well as 100% of the gypsum and sulfuric acid produced as byproducts of emissions desulfurization.

#### Breakdown of Coal Ash Recycling (displacement tons)



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

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## Environmental Impact Assessment

Before building or expanding power plants, we conduct environmental impact assessments in accordance with applicable laws and regulations and implement adequate environmental preservation measures, taking the opinions of local residents into consideration. After a power plant becomes operational, we carry out ongoing monitoring in accordance with environmental protection agreements entered into with relevant local governments to ensure that our environmental preservation measures are effective. Currently, 21 projects are in the process of environmental impact assessment (as of July 31, 2020).

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## Preservation of Aquatic Environments

From fiscal 2013 onward, the preservation of aquatic environments has been designated as one of the Corporate Targets under the J-POWER Group Environmental Management Vision with the aim of reinforcing our environmental preservation initiatives regarding rivers and the seas.

We undertake environmental preservation measures based on the specific regional environment and characteristics of each business site. For example, at hydroelectric power stations, we take measures regarding water quality and the accumulation of silt in dam lakes and downstream areas, while at thermal power stations we manage effluent emitted into nearby oceans in accordance with applicable laws and regulations.

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## Preservation of Biodiversity

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

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

The J-POWER Group owns forests in areas near its hydroelectric power facilities throughout Japan. We appropriately maintain these valuable forests in accordance with the Forest Protection Guidelines (formulated in 2007). Furthermore, the Group contributes to forest preservation as well as the reduction of CO<sub>2</sub> emissions through efforts to combust biomass fuel pellets made from forestry offcuts and other materials along with coal at coal-fired thermal power stations.

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## Ensuring Transparency and Reliability

The J-POWER Group conducts environmental preservation activities in accordance with its corporate philosophy. To this end, the Group utilizes environmental management systems (EMSs) at all its business sites in order to advance measures to enhance environmental management and to ensure thoroughgoing compliance with all applicable laws, regulations, and agreements.

Furthermore, we proactively engage in environmental communication activities.

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## Improvement of Environmental Management Level

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

In addition, the J-POWER Group plans and implements environmental education, using such means as group classes and e-learning, to foster a deeper awareness of environmental issues and sense of personal responsibility among employees.

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

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

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

In terms of responding to environmental incidents, based on our environmental management systems, we make every effort to prevent environmental incidents before they occur and to minimize harm if they do occur. We have in place a notification framework for when an environmental incident occurs, based on which we notify the local agencies concerned as well as the J-POWER Headquarters Emergency Response Team and related departments.

The J-POWER Headquarters Emergency Response Team promptly notifies top management and, in the interest of information disclosure, provides information on emergencies to the media and other relevant parties for publication. We also devise measures to prevent recurrences. In fiscal 2019, there were no environmental incidents that required reporting through the mass media.

# Environmental Data

## Business Activities and the Environment

The charts below detail the resource consumption and environmental load of the fiscal 2019 J-POWER Group operations within Japan.

Note: The scope of applicability includes J-POWER and its 25 consolidated domestic subsidiaries, which are engaged in the electric power business, electric power related business, and other business. The amounts attributed to consolidated subsidiaries are based on percentages corresponding to J-POWER's equity share.

Note that equity method affiliates (one company in Japan) are included in the calculation of CO<sub>2</sub> emissions from thermal power stations.

### INPUT

#### Thermal Power Generation

<b>• Fuel</b>	
Coal (wet) .....	19.50 million tons
Heavy oil .....	31 thousand kl
Light oil .....	31 thousand kl
Natural gas .....	96.1 million Nm³
Biomass .....	28 thousand tons
<b>• Industrial-use water</b> .....	
	10.01 million m³
<b>• Major chemicals (undiluted equivalents)</b>	
Limestone (CaCO₃) .....	158 thousand tons
Ammonia (NH₃) .....	13 thousand tons

#### Hydroelectric Power Generation

<b>• Power for pumped storage</b> .....	1.2 TWh
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#### Internal Use at Business Sites and Offices

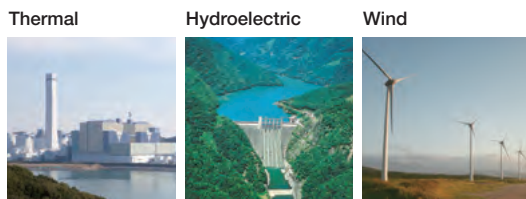
<b>• Electricity (purchased)</b>	
Business sites .....	105.80 GWh
Offices .....	14.29 GWh
<b>• Fuel (gasoline equivalent)</b>	
Business sites .....	9,636 kl
Offices .....	1,274 kl
<b>• Clean water</b>	
Business sites .....	87 thousand m <sup>3</sup>
Offices .....	215 thousand m <sup>3</sup>
<b>• Copy paper</b>	
Purchased (A4 equivalent) .....	50 million sheets
(Green procurement) .....	99%)

Notes: 1. Other than that discharged as wastewater, almost all industrial-use water used in thermal power stations is released into the atmosphere as steam.

2. River water used in hydroelectric power stations is not included in the input figures, as all such water is returned to the river after power generation.

### Business Activities

#### Electric Power Generated 65.7 TWh



Auxiliary power for operation and transmission loss

Electric Power Sales 61.3 TWh

#### Major Resources Recycled

Coal ash .....	1,630 thousand tons	[99.8%]
Sludge (excluding gypsum) .....	14 thousand tons	[72.7%]
Gypsum (desulfurization byproduct) .....	304 thousand tons	[100.0%]
Sulfuric acid (desulfurization byproduct) .....	24 thousand tons	[100.0%]
Other industrial waste .....	31 thousand tons	[85.3%]
Wastepaper .....	292 tons	[91.6%]
Driftwood caught in dam reservoirs .....	23 thousand m <sup>3</sup>	[90.8%]

Note: Percentages indicate recycling rate.

#### Effective Utilization (at cement plants, etc.)

### OUTPUT

#### Thermal Power Stations

<b>• Emissions into the atmosphere</b>	
CO <sub>2</sub> .....	43.84 million t-CO <sub>2</sub>
SOx .....	12 thousand tons
NOx .....	28 thousand tons
Soot and dust .....	1 thousand ton
<b>• Emissions into bodies of water</b>	
Wastewater .....	3.70 million m <sup>3</sup>
Wastewater COD .....	12 tons

#### CO<sub>2</sub> Emissions from Business-Site and Office Activities

<b>• Business sites</b> .....	74 thousand t-CO <sub>2</sub>
<b>• Offices</b> .....	10 thousand t-CO <sub>2</sub>

#### Waste

<b>Industrial waste</b> .....	13 thousand tons
(Of which, coal ash .....	2 thousand tons)
<b>• Specially controlled industrial waste</b> .....	0.4 thousand tons
<b>• Non-industrial waste</b>	
Wastepaper .....	27 tons
Driftwood caught in dam reservoirs .....	0.8 thousand m <sup>3</sup>

## Respect for Human Resources

The J-POWER Group considers each employee to be a valuable human resource and believes ensuring that its diverse human resources are able to take on new challenges with confidence and continue to work while achieving professional fulfillment enables sustainable corporate growth.

Accordingly, we are reinforcing the foundations for career development and establishing workplace environments and systems that make advantageous use of diversity.

### Recruiting and Making Effective Use of Human Resources

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

The J-POWER Group's approach is realizing stable recruiting in the interest of sustainable growth, seeking human resources in a wide range of fields and age groups, and providing employees with opportunities to take an active part. We are engaged in creating systems and working environments that enable our diverse personnel to fully demonstrate their capabilities, without regard for gender, age, or other such distinctions.

#### Number of New Graduates Hired (J-POWER)

	FY2018	FY2019	FY2020
Male	79	79	92
Female	12	17	10
Total	91	96	102

#### Status of Human Resource Retention (J-POWER)

Average length of continuous service	19.7 years (As of March 31, 2020)
Turnover rate for the three years after joining	1.4% (April 2019)

Note: Does not include temporary employees

#### Measures to Promote Diversity

As a measure to further make use of the skills of older workers, we have an employment extension system that allows those who have passed mandatory retirement age to extend their employment and continue working until the end of the fiscal year in which they reach the age of 65 should they so desire. Using this system in combination with the personnel registration system (available up to the end of the fiscal year in which they reach the age of 70), which introduces job opportunities in the Group, we will harness the experience, skills, and motivation to work possessed by the Group's most senior personnel for the sustained growth of our business. As of the end of March 2020, 146 employees (of J-POWER) are working using the employment extension system.

Our employment rate of persons with disabilities was 2.39% as of June 1, 2020. We are enhancing working environments and promoting understanding among other employees through such initiatives as establishing a consultation desk where employees with disabilities can discuss employment assistance and working environments as well as making office buildings barrier-free. We

will continue making efforts to raise our employment rate of persons with disabilities.

Aiming to build a workplace where diverse human resources can actively take part, we introduce our basic philosophy in our employee training (such as level-specific training, including that for new hires, and human rights training).

#### Protection of Employees' Rights

In accordance with the laws and regulations of each country in which we operate, the J-POWER Group protects the basic rights of its employees, including the prevention of child labor and forced labor, protection of the right to freedom of association, protection of the right to collective bargaining, and compliance with minimum wages. The Group also thoroughly prohibits discrimination in all its forms, including on the grounds of birth, nationality, race, creed, religion, gender, physical condition, and social status.

In addition, in order to protect the rights of employees and to maintain and improve their living standards, we obligate employees who are not in management positions to join labor unions and form collective agreements between our companies and their respective labor unions. In addition to consulting with the labor unions on important changes in working conditions, including salaries and bonuses, we hold consultations on management policy with labor unions once a year in order to reflect the opinions of employees in management policy.

#### Internships

J-POWER Group companies offer short-term internships several times each year with the aim of supporting the interns in their studies and in making future career choices.

In particular, J-POWER, JPHYTEC Co., Ltd., JPec Co., Ltd.,\* and KEC Corporation offer short-term summer internships to science students in graduate school, university, or technical college, providing experience in certain operations at J-POWER's power stations and other facilities. In fiscal 2019, a total of 95 interns from various areas of Japan participated in internships wherein they received practical training in the maintenance and operation of electric power facilities.

\* Renamed J-POWER Generation Service Co., Ltd. as of August 1, 2020

### Initiatives to Promote the Professional Participation of Women

J-POWER Business Service Corporation has formed a working group of female employees as part of efforts to promote the professional participation and success of women, who account for approximately 40% of that company's employees. Based on the results of surveys of female employees, this working group makes suggestions that are then reflected in company policy. The working group holds various activities, such as the Communication Café, in which female employees gather to exchange opinions. In fiscal 2019, it analyzed current conditions and made suggestions regarding the three topics of interpersonal relations and the working environment, balancing work and private life, and professional fulfillment and job content.



Actively exchanging opinions at a Communication Café event



Human Resource Development

Human Resource Development Programs

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

Overview of the CDP

The CDP comprises personnel requirements, job rotation, and career building support systems. By implementing human resource development measures from a number of angles, we aim to increase value for both the Company and employees.

Personnel Requirements

The Company lays out the kinds of human resources that it needs as targets for its human resource development efforts, while employees use these targets as guideposts for their own career building and skill development efforts.

Job Rotation

J-POWER divides its employees' careers into three broad stages: the basic knowledge and skill acquisition stage, the expert stage, and the professional stage. Job rotation helps employees gain the abilities necessary for each stage.

Career Building Support Systems

To support employee's independent career building efforts, the Company systematically operates a range of support systems.

Self-Declaration System	Every year, employees make a self-declaration to the Company about their future career outlook, based in part on an examination of their execution of work duties and abilities. The Company's managers discuss the declarations with employees, offer advice as appropriate from a medium- to long-term human resource development perspective, and plan and implement employee rotations as needed.
Training System	The Company implements training systems in step with each employee's career stage, required skills, career path, and personal motivation. These include level-specific training <sup>1</sup> and department-specific training <sup>2</sup> as well as objective-specific training, self-improvement through correspondence or campus-based education, sending employees to study or work at universities or other institutions, including NGOs, in and outside Japan, and top management candidate training.

Human resource development through such training programs is aimed not only at ensuring our human resources acquire the basic knowledge and skills necessary for our business, but also at fostering next-generation leaders, promoting diversity, and empowering our veteran employees.

1. New-hire training, training regarding careers, training for newly appointed managers, training for veteran employees, etc.  
2. The technical departments (civil and architectural engineering; hydroelectric power; transmission and transformation; telecommunications; thermal power; and nuclear power) each have their own training facilities in order to systematically develop engineers

CDPs for Female Employees

We have set up CDPs for women by job type with the aim of enabling women to continue working and build careers even when life events, such as giving birth, temporarily restrict the work they can do. These CDPs serve as useful references for female employees and their supervisors when thinking about career development.

Support for Developing Junior Employees

To promote the development of junior employees and more active workplace communication, we appoint workplace trainers<sup>1</sup> for new hires and seek to thoroughly reinforce on-the-job training by involving entire workplaces, including more senior employees and supervisors, in employee development. To facilitate broader communication, we also appoint mentors<sup>2</sup> for employees in their second year with the Company, as needed.

1. Senior employees from within the same workplace who provide advice and answer questions about ways of doing work, achievements, and other such topics.  
2. Senior employees from other workplaces who provide advice and answer questions about future career development and other such topics.

Evaluation and Management System

We have adopted an evaluation system that is based on an individual goal management system. The system encourages employees to perform work autonomously, heighten their drive to achieve, and improve their faculties while working toward achieving their goals. We also set divisional goals to realize divisional strategies. Employees are encouraged to work together to achieve the divisional goals.

Employees set goals at the beginning of the fiscal year that they then work toward. Meetings are held with employees at the beginning, middle, and end of the fiscal year to evaluate, respectively, the appropriateness of their goals, their progress toward them, and the final degree of achievement. These meetings also provide opportunities to provide advice on how employees can reach their goals and to hear their workplace-related opinions and requests.

## Developing Environments to Create Dynamic Workplaces

### Toward the Realization of Work-Life Balance

The J-POWER Group is actively developing working environments and cultures that enable every employee to autonomously enhance their work and personal life and focus on highly creative work. We are taking measures to help employees improve their work-life balance, including enhancing and encouraging the use of childcare and nursing care support programs, and normalizing working hours.

### Improving Labor Productivity

Aiming attract diverse human resources and enable them to each excel in their own ways, as part of the full-scale implementation of work reforms at J-POWER, we have established an action program known as J-POWER Challenge 30, setting and working toward goals that include reducing the number of overtime hours by 30% and increasing paid vacation days taken by 30%, compared with fiscal 2016 levels, by the end of fiscal 2020.

#### Measures under J-POWER Challenge 30

Introducing a system for using paid leave in hourly increments

Sequential introduction of RPA\* in offices

Complete lights-out and a PC shutdown at Headquarters at 10 p.m.

Replacing all PCs with lightweight, portable models

Installing groupware

Shifting to paperless operations for management meetings

Adopting a system that allows employees to take leave to accompany their spouse if transferred for work

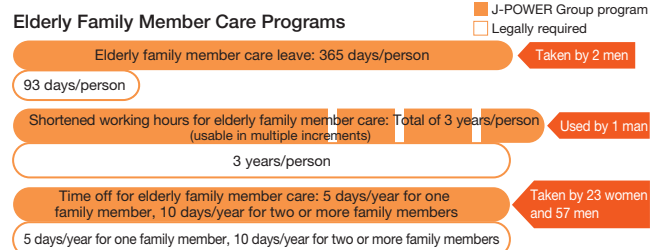
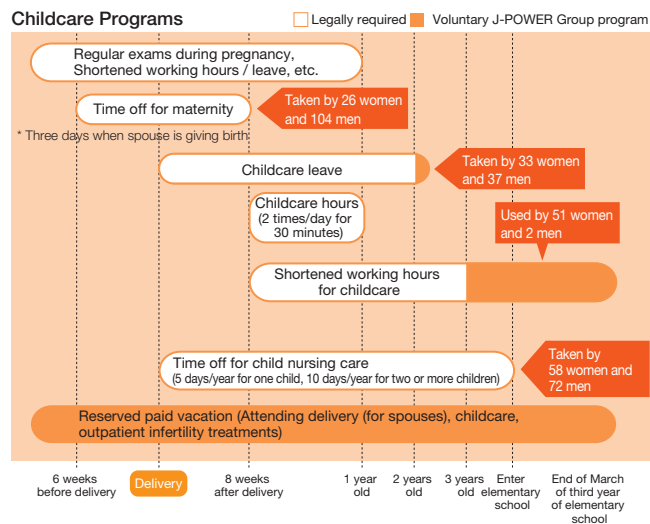
Adopting and expanding working at home systems

Flextime work system (in preparations)

\* Robotic process automation (RPA): Work process automation using software robots

	FY2016 Result	FY2019 Result	End of FY2020 Target
Overtime hours	24.6 hrs/month	21.3 hrs/month	17 hrs/month
Days of paid vacation taken	15.4 days/year	16.7 days/year	20 days/year

### Overview of the Childcare and Nursing Care Support Programs and Results in Fiscal 2019 (J-POWER Group)



### “Platinum Kurumin” Special Certification Mark

Certified by the Minister for Health, Labour and Welfare as a supportive company for childcare, J-POWER received a “Kurumin” certification. We also received the special “Platinum Kurumin” mark certification, which is awarded only to companies with measures that meet an even higher standard. We will continue making improvements for an even better work environment so that all employees will be able to harmonize their work and their personal life and exercise their abilities fully.



### Consultation Desk

Aiming to create employee-friendly workplaces, we have established a consultation desk where employees can discuss working hours, the workplace environment, and harassment. The privacy of employees using this desk is assured. In order to prevent harassment, we have also developed Company regulations, manuals, and other such resources, and we are implementing education for increased awareness via level-specific training courses, posters, and other such means. We are also training managers in each section in how to respond should a harassment-related incident occur as part of efforts to maintain a framework to respond to incidents appropriately.

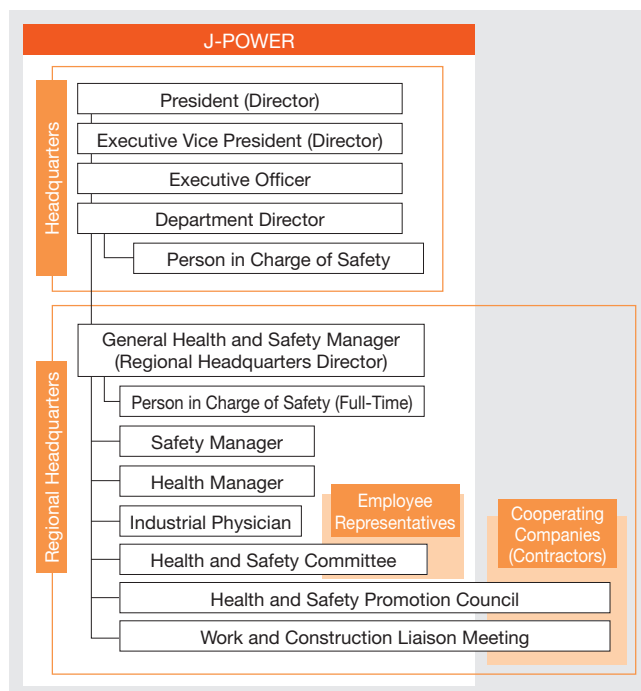
# Health and Safety Management

The J-POWER Group aims to create safe, healthy, and rewarding workplaces as the foundation of its business activities. J-POWER and other Group companies each have roles and responsibilities and collaborate on implementing health and safety management to prevent occupational accidents, including those of cooperating companies (contractors), and to maintain and improve the health of employees.

## Health and Safety Management Systems

Based on laws and regulations, the J-POWER Group has established health and safety management systems, which include employee representatives and cooperating companies, at Headquarters and local operating units, such as power plants.

### Health and Safety Management System



Note: Since health and safety management systems differ depending on the work content and number of employees, etc., of each operating unit, this diagram shows a typical system at a regional headquarters that manages hydroelectric power plants.

## Measures Pursuant to the Group Operational Health and Safety Plan

The J-POWER Group has established a groupwide Group Operational Health and Safety Plan. Based on the plan, individual Group companies formulate their own operational health and safety plans and take measures to promote occupational health and safety in cooperation with the Group.

The roles, operations, and workplace environments of Group companies vary significantly. Accordingly, to efficiently and effectively advance initiatives across the Group, the Group Operational Health and Safety Plan designates only major targets for the entire Group; specific safety initiatives to achieve said targets are designated in each Group company's operational health and safety plan in line with their respective conditions and needs. At the Group level, we check, evaluate, and take steps to improve each company's plan and its implementation, aiming to ensure the steady implementation of said plans.

The results from the implementation of operational health and safety plans are compiled at the end of the fiscal year and reported to the Executive Committee\* and the Board of Directors. The operational health and safety plans for the next fiscal year are drawn up on the basis of those results.

\* Executive Committee: Please refer to page 55.

Fiscal 2020 Group Operational Health and Safety Plan		
Major Targets	Operational Safety	No serious disasters (including traffic accidents and accidents while commuting)
	Operational Health	Preventing and raising awareness of lifestyle-related diseases and enhancing mental health care

## Occupational Accident Prevention Initiatives

In recent years, many occupational accidents have occurred among contractors engaged in construction and other work. Many of these are recurring accidents that are serious or have the potential to become serious. It is therefore extremely important to promote unified safety activities that include contractors to prevent and eliminate such accidents. To this end, we have designated the following operational safety priorities: building more effective safety activities through the integrated consideration of facilities, management, and people; implementing thorough accident prevention measures and their aggressive lateral roll-out; increasing safety awareness and communication; preventing injuries from traffic accidents and accidents while commuting; and pursuing other ongoing initiatives (PDCA cycle for safety activities). Based on these priorities, we are forcefully advancing preventive efforts.

Furthermore, in light of the occurrence of serious accidents and the plateau in the overall number of accidents in recent years, we are planning the J-POWER Group Health and Safety Convention as part of efforts to cultivate and spread awareness of the utmost importance of safety and safe behavior.

When we place a work order for construction with a contractor, we take into consideration such factors as work methods and scheduling in order to ensure a healthy and safe work environment.

The number of occurrences and nature of occupational accidents as well as analyses of the circumstances are reported to the Executive Committee and Board of Directors on a quarterly basis.



Safety pledge at the Health and Safety Convention (photo of the previous fiscal year's event)

## Health and Safety Training Programs

J-POWER Headquarters implements health and safety training for Group companies at J-POWER Headquarters and local operating units for the purpose of improving the health and safety of the entire J-POWER Group. In addition, local operating units implement safety training suitable for their business operations, such as legally mandated training for new hires and employees newly transferred in, special training for work involving electricity, and training about relevant laws and regulations. These units also implement mental health-related training on line-of-command care and self-care. Management-level employees, such as superintendents, and dedicated safety staff are required to participate in seminars and courses held by external organizations in order to improve their health and safety knowledge and management skills and to raise safety awareness. In fiscal 2019, 1,033 employees participated in such training programs held by J-POWER Headquarters.

## Health and Safety Management with Regard to Radiation

J-POWER is currently proceeding with the construction of the Ohma Nuclear Power Plant. Currently, construction work is still under way and there is no danger of employees and workers being affected by radiation. We will have established a health and safety management system related to radiation by the time that it becomes necessary.

## Maintaining the Physical and Mental Health of Employees and Their Families

To maintain and improve the health of employees and their families, we encourage employees to undergo health checks and health maintenance guidance, and take infectious disease prevention measures. In addition, we place priority on the prevention of lifestyle-related disease and mental health disorders. Accordingly, we provide special health checks and specific health guidance as well as health maintenance and improvement activities\* and stress check programs. By taking these measures, we support the sound physical and mental health of employees and their families.

\* Health maintenance and improvement activities: Comprehensive activities that integrate activities aimed at total health, both physical and mental, based on Ministry of Health, Labour and Welfare guidelines on Total Health Promotion Plans (THP), and activities aimed at fostering a vibrant environment through the Company's unique communication revitalization initiative.

### Certified as a Health & Productivity Management Outstanding Organization (Large Enterprise Category)

J-POWER was certified as a 2020 Health & Productivity Management Outstanding Organization in the large enterprise category by Nippon Kenko Kaigi under the recognition program for such companies established by the Ministry of Economy, Trade and Industry. J-POWER believes that this certification was given in recognition of its initiatives to solve issues related to maintaining and improving the health of its employees. Going forward, the Group will continue initiatives in this area.



## Basic Policy on Occupational Health and Safety

The Company aims to create safe, healthy, and rewarding workplaces for the J-POWER Group.

The Company and general directors of operating units fully play their parts in establishing and operating a robust occupational health and safety management system with the cooperation of employees and all concerned while remaining in compliance with laws, regulations, and self-defined rules. We also work to promote overall safety management and improve the health and safety standards of the J-POWER Group. Through these measures, we prevent occupational accidents and maintain and promote health.

### Creating Rewarding Workplaces

The Company works to create rewarding workplaces that enable each and every J-POWER Group employee to realize health and self-fulfillment by ensuring, maintaining, and improving workplaces that are safe and comfortable to work in.

### Compliance with Laws, Regulations, and Other Rules

The Company complies with external and internal rules, including the relevant laws, regulations, and internal Company regulations, and endeavors to prevent occupational accidents as well as to maintain and promote health in the J-POWER Group.

### Improvement of Health and Safety Management

The Company and general directors of operating units establish and operate a systematic, efficient occupational health and safety management system by supervising safety managers, health managers, and those in charge of safety at the operating units and by gaining the cooperation of employees and all others concerned, thus working to improve the level of health and safety in the J-POWER Group.

### Responsibilities of Management

The Company and general directors of operating units recognize their responsibility to realize this basic policy, to this end taking the initiative to set an example for those that follow while keeping the relevant parties thoroughly informed of this basic policy.

When a situation arises that runs contrary to this aim, the Company and the general directors of operating units will take the initiative to solve the problem while working to investigate the cause, prevent recurrences, clarify the root causes, and take appropriate measures.

# Community Engagement

The J-POWER Group's operations center mainly on businesses such as the power generation and power transmission businesses, in which it constructs large-scale facilities and maintain and operates them for a long time. Accordingly, we seek to build positive relationships of mutual trust and benefit with the people and communities related to our business activities.

## Respect for Human Rights

J-POWER recognizes that respecting the human rights of the stakeholders involved in and affected by all of its business activities is a matter of basic corporate responsibility.

The Universal Declaration of Human Rights, adopted by the United Nations in 1948, defines various aspects of human rights and declares that all human beings are entitled to all such rights.

J-POWER's Compliance Action Guidelines specify respecting the human rights of all people, including employees. Employees may seek help or advice at Compliance Consultation Points\* if

they suspect a human rights violation. We also incorporate human rights training in employee training programs and provide human rights training in accordance with the needs of local business units.

Going forward, honoring the Universal Declaration of Human Rights, we will continue striving to protect and respect the human rights of all our stakeholders.

\* Compliance Consultation Points: Please refer to page 60.

## Support for Volunteer Activities

To support employees' volunteer activities, we are taking measures to maintain an environment that is conducive to volunteer activities, including offering a volunteer leave of absence system.

### J-POWER Group Approach to Social Contribution Activities (Established April 1, 2009)

The J-POWER Group's corporate philosophy states that "We pursue harmony with the environment, and thrive in the trust of communities where we live and work," and that "We regard profits as the source of our growth, and share the fruits with the society." In line with this philosophy and as a member of society, the Group engages in long-term social contribution activities aimed at the sound, sustainable development of society.

Based on the following two main themes of our activities, we value communication, knowledge sharing, and learning with local community members and people who are working to harmonize the energy supply with the environment. In this way, we steadily engage in social contribution activities and support the volunteer activities of our employees.

#### Community Involvement

Our corporate activities are supported by the communities in which our power plants and other facilities are located. Just as every employee strives to be a good citizen in each community, we aim for every Group location to contribute to the community and society as a good corporate citizen. Through activities that earn the trust and familiarity of local residents, we aim to be involved in communities and to grow in step with society.

#### Harmonizing the Energy Supply with the Environment

Rich, fulfilling lifestyles require both the energy that supports everyday living and a healthy natural environment. Leveraging the environmental insight developed through our businesses, we are working with a wide range of people who are seeking to harmonize the energy supply with the environment and implementing activities to develop mindsets and technologies that prioritize both energy and the environment. By doing so, we are contributing to the sustainable development of Japan and the world.





## Social Contribution Activities

Based on the J-POWER Group Approach to Social Contribution Activities\*, as a good corporate citizen, the J-POWER Group proactively engages in social contribution activities, including supporting culture and the arts, cooperating with local communities, supporting participation in volunteer activities, and contributing to international society. Through such efforts, the Group seeks to contribute to social development.

\* J-POWER Group Approach to Social Contribution Activities: Please refer to page 52.

### Social Contribution Activities in Fiscal 2019

For our social contribution activities in fiscal 2019, we implemented a variety of initiatives that included the following programs.

Program	Overview	Target	Partners	Number of participants, etc.
<b>Ecology and Energy Experience Tour</b> 	<p>To promote the coexistence of energy and the environment, J-POWER holds the Ecology and Energy Experience Tour, in which participants learn about the links between energy and the environment through hands-on experience.</p> <p>Tours focusing on hydroelectric power were conducted for children and their parents, for students, and for elementary and junior high school teachers at Miboro Power Plant and Okutadami Power Plant. Tours focused on thermal power were conducted for students at Isogo Thermal Power Plant.</p> <p>The Okutadami tour made use of the Midori no Gakuen youth educational and lodging facilities and Lake Okutadami Tour Boat operated by Group company Okutadami Kanko Co., Ltd., providing an opportunity for experiential learning in which, surrounded by the grand natural environment of beech forests at Lake Okutadami, participants could see, feel, think, and enjoy themselves.</p>	<p><b>Parent-child tour</b> Children in grades 4-6 and their parents</p> <p><b>Student tour</b> Technical college, university, and graduate school students</p> <p><b>Teacher tour</b> Elementary and junior high school teachers</p>	<p>KEEP, Inc., TOYOTA Shirakawa-Go Eco-Institute, Takakura Environmental Institute, JPec Co., Ltd.,* Okutadami Kanko Co., Ltd., Reborn Corporation</p>	<p><b>Parent-child tour</b> 63 parent-child pairs (126 total)</p> <p><b>Student tour</b> Hydroelectric power tours: 33 students Thermal power tour: 26 students</p> <p><b>Teacher tour</b> 30 teachers</p>
<b>Nahari Umaji Village Forestry Skills Competition (Kochi Prefecture)</b> 	<p>The J-POWER Group conducts a variety of social and cooperative activities with local communities at its power plants and transmission line engineering offices, etc., throughout Japan.</p> <p>By the lake at Yanase Dam in Kochi Prefecture, we participated in a local event in which local forestry personnel compete on the basis on their skills, reinforcing ties in the community.</p>	<p>Residents of Umaji Village and other parts of Kochi Prefecture who are involved in forestry, forestry college, village hall, local companies, etc.</p>	<p>Umaji Village Hall, Umaji Village Forestry Youth Club</p>	<p>Approximately 150</p>

\* Renamed J-POWER Generation Service Co., Ltd. as of August 1, 2020

## Community Development Activities at the Central Java Project

The J-POWER Group is currently constructing the Central Java Project (2,000 MW, coal) in Indonesia. This project is known as a model project for its high efficiency and environmental friendliness. The J-POWER Group, through the project company Bhimasena Power Indonesia (BPI), provides various supporting activities for the sustainable growth of the local community in the area near the project site. In order to reflect local needs, the activities were reviewed by local citizens and the municipal governments, and thus BPI supported the implementation. For these supporting initiatives, BPI has received a number of awards both within and outside of Indonesia.

### Specific Initiatives

<b>Economic activity support</b>	Supporting small businesses (laundries, tailors, etc.) run by local resident groups as well as local microfinance (providing materials, training, etc.) Support provided for 199 groups and 2,849 individuals as of 2019
<b>Medical support</b>	Providing supplemental food for infants and the elderly at village clinics, providing medical kits, training medical volunteers
<b>Educational support</b>	Supporting an environmental education program of the Indonesian government, supporting the creation of a village library in coordination with the regional government and the Coca Cola Foundation
<b>Infrastructure improvement support</b>	Setting up public toilets, renovating mosques, setting up a medical clinic, repairing roads, etc. 335 projects completed as of 2019
<b>Social, cultural, and environmental support</b>	Recycling activities, coastal tree planting in cooperation with Batang Red Cross, supporting mangrove re-planting, installing artificial fish reefs with fish reef blocks, town cleanup, etc.

### Main Awards Received

- Global Good Governance (3G) Award for category Environmental Responsibility 2019
- Indonesia Green Award (IGA) for category Coastal Ecosystem Restoration 2019
- AREA (Asia Responsible Entrepreneurship) Awards for category Health Promotion 2018

- TOP CSR Improvement 2017
- TOP Leader on CSR Commitment 2017 for Takashi Irie\*
- Special Award as The Best Environmental Concerned Company on Indonesia Best Electricity Award (IBEA) 2016

\* Then the CEO of BPI, dispatched from J-POWER.



CEO Yasuhiro Koide (dispatched employee of J-POWER) accepting the 3G Award

## Corporate Governance

In accordance with its Corporate Philosophy, the Company endeavors to enhance corporate governance on an ongoing basis in order to realize sustainable growth and improve corporate value over the medium to long term.

The Company has established the Basic Policy on Corporate Governance. For more information, please refer to the J-POWER website.

▶ <https://www.jpowers.co.jp/english/ir/ir23200.html>

### Respect for Shareholder Rights

The J-POWER Group believes that sustainable growth and the enhancement of corporate value over the medium to long term can be achieved only in cooperation with a wide range of stakeholders. One important group of stakeholders is shareholders. The Company respects shareholder rights in order to allow for proper collaboration with shareholders.

#### Ensuring the Rights and Equality of Shareholders

The Company's policy regarding shareholder rights, such as voting rights at the general meeting of shareholders, is to respect such rights and ensure the substantial equality of shareholders. In addition, the Company gives consideration to ensuring that the special rights that are granted to minority shareholders are upheld with regard to confronting listed companies and their officers (including the right to seek an injunction against illegal activities and the right to file a shareholder lawsuit).

#### General Meetings of Shareholders

The Company provides shareholders with information that it believes to be useful for appropriate decision making at general meetings of shareholders. To this end, it is constantly striving to improve the content of convocation notices, reference materials, and business reports. It also provides information via financial results, timely disclosure materials, and disclosure via its website, as needed.

The Company sends a convocation notice for each ordinary general meeting of shareholders around three weeks prior to the meeting date to ensure that shareholders have sufficient time to consider the proposals to be put before the meetings and enable them to appropriately exercise their voting rights. The Company also endeavors to disclose information included in the convocation notice online in both Japanese and English prior to sending the notice. Moreover, the Company strives to avoid scheduling the general meeting of shareholders for the date most crowded with other companies' shareholder meetings.

#### General Meeting of Shareholders for Fiscal 2019

<b>Date</b>	June 25, 2020 (to avoid the day most crowded with other companies' shareholder meetings)
<b>Convocation notice</b>	Posted online Japanese: May 22, 2020; English: June 3, 2020 Mailed June 2, 2020 (nine days earlier than legally required)

#### Strategic Shareholdings

J-POWER does not maintain strategic shareholdings unless such shareholdings are deemed to serve a purpose.

Shareholdings are deemed to serve a purpose if they are judged to contribute to the Company's sustainable growth and the medium- to long-term enhancement of its corporate value based on the comprehensive consideration of their profitability, verified through properly ascertaining expected returns and other effects, as well as their objectives, such as the development of joint business and the need to maintain, strengthen, or build business relationships.

Every year, the Board of Directors evaluates the rationality and necessity of each strategic shareholding from such perspectives as consistency with the objectives of said holdings and the balance of

the shareholding's profitability against the Company's cost of capital. Holdings found to not serve a purpose are disposed of, with due consideration given to the market impact of such disposal.

J-POWER exercises the voting rights of its strategically held shares based on careful consideration of the medium- to long-term enhancement of the corporate value of the Company and the companies whose shares it holds as well as its objectives in holding such shares.

### Shareholder and Investor Engagement

J-POWER engages with shareholders and investors not only at General Meetings of Shareholders, but through such means as facility tours for shareholders, corporate presentations for individual investors, and individual meetings with institutional investors. Such efforts enable shareholder and investors to better understand our businesses, and the opinions they express are shared with management so that they can be put to use in our operations.



Facility tour for shareholders  
(Chimney at Isogo Thermal Power Plant)

### Corporate Governance System

J-POWER has adopted a Company with an Audit & Supervisory Board structure, and has put in place a system for mutual oversight among Directors through meetings of the Board of Directors attended by Outside Directors, who participate in the Company's management decision making from an independent position.

Also, in fiscal 2019 the Company established the Nomination and Compensation Committee, more than half the members of which are Independent Officers, to enhance the independence, objectivity, and accountability of the Board of Directors with regard to the nomination and compensation of Directors and top management.

Further, the execution of duties by Directors is constantly monitored through the attendance at the meetings of the Board of Directors and other management meetings of the Audit & Supervisory Board Members, including Outside Audit & Supervisory

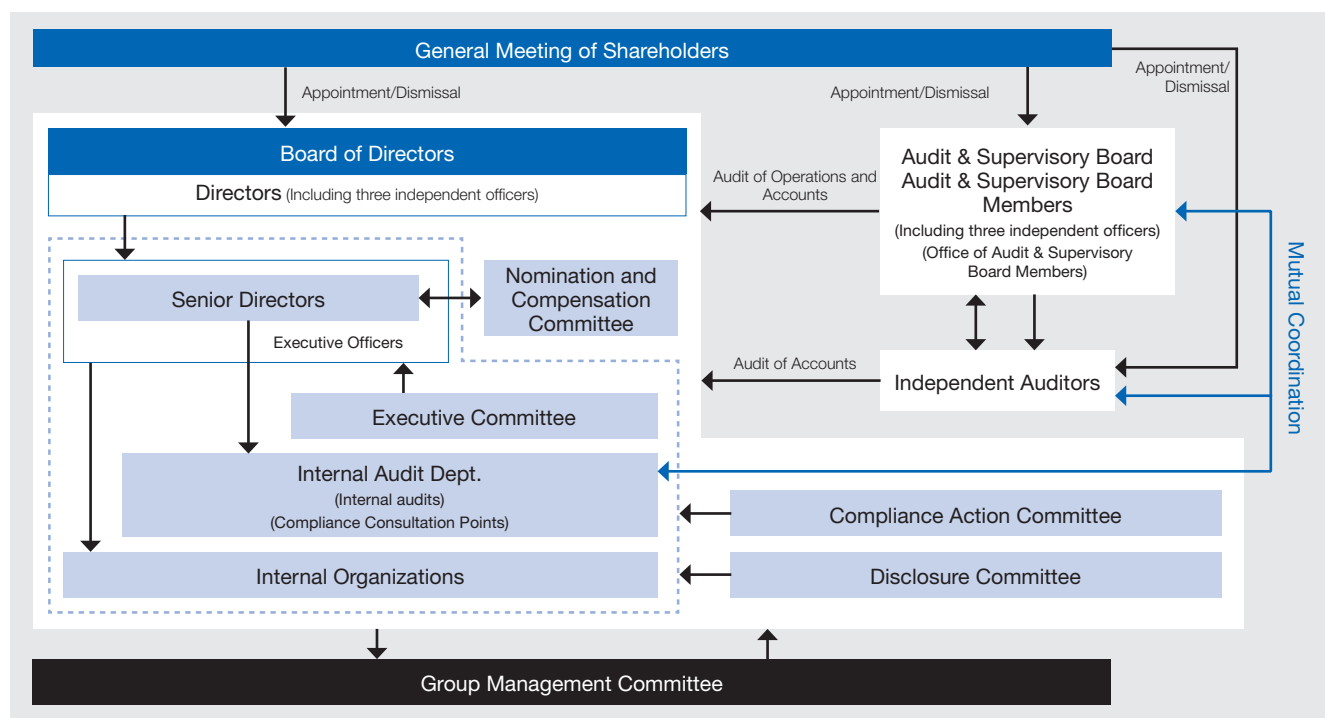
Board Members with abundant experience in such areas as the management of leading Japanese listed companies and execution of government policies. The Company believes this system allows for sufficient corporate governance functionality.

In addition to the above, the Company also maintains the Executive Committee.

#### Nomination and Compensation Committee Members (As of June 25, 2020)

	Independent Officers: 3	Internal Officers: 2
Chairman	Go Kajitani, Outside Director	Hitoshi Murayama, Representative Director, Chairman of the Board of Directors
	Mutsutake Otsuka, Outside Audit & Supervisory Board Member	Toshifumi Watanabe, Representative Director, President
	Kiyoshi Nakanishi, Outside Audit & Supervisory Board Member	

#### Corporate Governance Structure (As of June 25, 2020)



#### Composition of the Board of Directors and the Audit & Supervisory Board

##### Composition of the Board of Directors

The Board of Directors is composed of Directors with abundant experience, distinguished knowledge, and advanced specialization, ensuring that an overall balance and diversity of knowledge, experience, and abilities is maintained. The number of Directors is capped at 14.

In addition, to ensure the effectiveness of independent and objective management supervision by the Board of Directors, the Company endeavors to appoint at least two Independent Outside Directors, giving consideration to their experience, knowledge, specialization, and other attributes.

Currently, the total number of Directors is 13, including three Independent Outside Directors.

##### Composition of the Audit & Supervisory Board

The Audit & Supervisory Board comprises a maximum of five Audit & Supervisory Board Members, at least half of whom are required to be Outside Audit & Supervisory Board Members. In addition, at least one person with appropriate knowledge of finance and accounting is appointed as an Audit & Supervisory Board Member.\*

Currently, the total number of the Audit & Supervisory Board Members is five, including three Independent Outside Audit & Supervisory Board Members.

\* Senior Audit & Supervisory Board Member Hiroshi Fujioke (Independent Outside Audit & Supervisory Board Member) has a high level of knowledge in the area of finance and accounting as he has had many years of experience in fiscal and financial administration.

Furthermore, Senior Audit & Supervisory Board Member Shinichi Kawatani has a high level of knowledge in the area of finance and accounting as he has experience in the Company's accounting and finance department.

#### System for the Execution of Directors' Duties

##### Ensuring Effectiveness in Business Execution

The Board of Directors meets monthly in principle\* and on an as-needed basis, with attendance by all Directors and Audit & Supervisory Board Members, including Outside Directors and Outside Audit & Supervisory Board Members. The Executive Committee meets weekly in principle, with attendance by all Senior Directors, Senior Executive Officers, and full-time Audit & Supervisory Board Members. This committee discusses matters subject to deliberation by the Board of Directors, significant company-wide matters related to business execution by the President and Executive Vice Presidents based on policies decided by the Board of Directors, and important matters related to individual business execution.

In addition to allocating functions for the Board of Directors and Executive Committee, the Company has established a system in which Senior Directors and Executive Officers share responsibility for business execution. This system clarifies responsibilities and authority, enables appropriate and prompt decision making, and provides for efficient corporate management.

\* The Board of Directors met 12 times during fiscal 2019.

## Corporate Governance

### Ensuring Appropriateness in Business Execution

The Company has established the Internal Audit Department to ensure proper business execution. The department conducts internal audits from a perspective that is independent of other operating units. In addition, each operating unit regularly conducts self-audits of its own business execution.

### Preventing Conflicts of Interest

The Directors of the Company, in accordance with its Corporate Philosophy, Corporate Conduct Rules, and Compliance Action Guidelines, exemplify honest and fair conduct based on a steadfast spirit of compliance and business ethics. In addition, the Company works to prevent conflicts of interest in the event that the Company engages in a transaction with a Director or a major shareholder\* by obtaining the approval of the Board of Directors before executing the transaction and reporting the results of the transaction to the Board of Directors.

\* Shareholders with shares representing 10% or more of the voting rights in the Company

### Audits by Audit & Supervisory Board Members

In accordance with the Companies Act, J-POWER appoints Audit & Supervisory Board Members, who audit the legality and appropriateness of Directors' business execution. At J-POWER's Headquarters, Audit & Supervisory Board Members conduct audits by attending the meetings of the Board of Directors and other important meetings and observing the status of the execution of Directors' and Executive Officers' duties. In addition, the Audit & Supervisory Board Members perform site visits to local operating units and subsidiaries in Japan and overseas.

In the course of accounting audits, Audit & Supervisory Board Members liaise with the Independent Auditors to regularly receive reports and exchange opinions regarding auditing schedules and results as a means of ensuring the appropriateness of the Independent Auditors' auditing methods and results.

When performing audits, Audit & Supervisory Board Members liaise with the Internal Audit Department.

With regard to staff under the Audit & Supervisory Board Members, the Company has established the Office of Audit & Supervisory Board Members as an independent unit outside of the Directors' chain of command. The office's full-time specialist staff assists the Audit & Supervisory Board Members in the course of their audits.

### Group Governance

With regard to the administration of subsidiaries and affiliates, the J-POWER Group's basic policy calls for group-wide business development in accordance with the Group's management plan. The administration of subsidiaries and affiliates is undertaken in accordance with the Company's internal regulations, and the Group Management Committee works to improve the appropriateness of operations for the entire corporate Group. In addition, the Audit & Supervisory Board Members and the Internal Audit Department implement audits of subsidiaries and affiliates with the objective of ensuring proper operations at all Group companies.

### Evaluation of Effectiveness of the Board of Directors

The Company analyzes and evaluates the effectiveness of the Board of Directors on an annual basis.

To improve the effectiveness of the Board of Directors, the Company strives to enhance the quality of discussion at monthly meetings of the Board of Directors and has implemented a number of initiatives, including the following.

- Utilizing the Nomination and Compensation Committee
- Creating opportunities for discussion among officers outside of Board of Directors meetings

- Enhancing the provision of information, including the content of Executive Committee discussions, to outside officers
- Inspections of power plants and other facilities by outside officers
- Training for internal officers

Regarding the evaluation in 2020, the Board of Directors discussed the status of measures implemented on the basis of the previous year's analysis and evaluation as well as the results of interviews and surveys of all officers, including outside officers. As a result of the discussion, the effectiveness of the Board of Directors was deemed sufficient. Going forward, the Company will enhance discussion following changes in the business environment, and make continual efforts to enhance the effectiveness of the Board of Directors.

### Outside Officers (Outside Directors and Outside Audit & Supervisory Board Members)

The Company's Outside Directors and Outside Audit & Supervisory Board Members are independent officers that meet both the requirements for independent officers prescribed by the Tokyo Stock Exchange and the Criteria to Determine the Independence of Outside Officers prescribed by the Company.

### Appointment and Dismissal of Officers

The Board of Directors appoints as members of top management and nominates as candidates for Director and Audit & Supervisory Board Member individuals who have the abundant experience, distinguished knowledge, and advanced specialization necessary for those positions, based on discussion by the Board following the President's presentation of recommendations. The President's recommendations for members of top management and Director candidates are themselves based on the deliberations of the Nomination and Compensation Committee.

When a member of top management or a Director is found to have acted inappropriately or unreasonably, or there is some other marked impediment to the continued execution of the individual's duties, the Board of Directors may decide, based on discussion within the Board after deliberation by the Nomination and Compensation Committee, to dismiss or otherwise take action to deal with the member of top management or Director in question.

### Officers' Compensation

The compensation of top management and Directors is determined by means of discussion at meetings of the Board of Directors, after comprehensively taking into account corporate performance, position held, and other factors in light of the characteristics of the Company's business, namely, aiming to recover investment through the long-term operation of power plants, etc., and is based on proposals made by the President following deliberation by the Nomination and Compensation Committee.

By resolution at the 54th Ordinary General Meeting of Shareholders held on June 28, 2006, total compensation for Directors is capped at ¥625 million annually (a fixed monthly salary calculated according to position and a performance-linked bonus paid once a year. Employee salaries for Directors who serve in dual capacity as employees are excluded). Each Director's compensation is determined within this cap.

Total compensation for the Audit & Supervisory Board Members was capped at ¥120 million annually (a fixed monthly salary calculated according to position) at the same general meeting of shareholders. Each Audit & Supervisory Board Member's compensation is determined, within the cap prescribed above, by means of consultation among Audit & Supervisory Board Members.



## Directors, Audit & Supervisory Board Members, and Executive Officers (As of June 25, 2020)

### Directors



Representative Director  
Chairman

**Hitoshi Murayama**  
Company-wide compliance  
Technology oversight



Representative Director  
President

**Toshifumi Watanabe**



Representative Director  
**Akihito Urashima**



Director  
**Yoshiki Onoi**



Director  
**Hiromi Minaminosono**



Director  
**Makoto Honda**



Director  
**Hiroyasu Sugiyama**



Director  
**Hitoshi Kanno**



Director  
**Yoshikazu Shimada**



Director  
**Hiroshi Sasatsu**



Director Outside Independent  
**Go Kajitani**



Director Outside Independent  
**Tomonori Ito**



Director Outside Independent  
**John Buchanan**

### Audit & Supervisory Board Members

#### Senior Audit & Supervisory Board Members

**Naori Fukuda**

**Hiroshi Fujioka** Outside Independent

**Shinichi Kawatani**

#### Audit & Supervisory Board Members

**Mutsutake Otsuka** Outside Independent

**Kiyoshi Nakanishi** Outside Independent



## Corporate Governance

### Independent Outside Directors

#### Go Kajitani (b. November 22, 1936)

Career summary	
April 1967	Registered as an attorney at law (Dai-ichi Tokyo Bar Association) Joined KAJITANI LAW OFFICES
April 1998	President of Dai-ichi Tokyo Bar Association, Vice President of Japan Federation of Bar Associations
April 1999	Senior Partner of KAJITANI LAW OFFICES
June 2003	Outside Audit & Supervisory Board Member of NICHIAI Corporation
April 2004	President of Japan Federation of Bar Associations
June 2007	Chairman of the Central Third-Party Committee to Check Pension Records, the Ministry of Internal Affairs and Communications
June 2009	Director (Outside Director) of the Company (current position)
April 2011	President of Japan Legal Support Center
June 2011	Outside Audit & Supervisory Board Member of The Yokohama Rubber Co., Ltd.

#### Reason for selection

Go Kajitani has distinguished knowledge as an attorney at law and abundant experience in the legal profession.

#### Main activities during fiscal 2019

He attended 12 of the 12 meetings of the Board of Directors and made comments primarily based on his distinguished knowledge and a wide range of experience as an attorney at law.

#### Tomonori Ito (b. January 9, 1957)

Career summary	
April 1979	Joined The Bank of Tokyo, Ltd.
March 1990	Vice President of Investment Banking Group, Bank of Tokyo Trust Company, New York Branch
April 1994	Vice President of Emerging Market Group, The Bank of Tokyo, Ltd., New York Branch
March 1995	Manager of Business Development Daini, Union Bank of Switzerland, Tokyo Branch
August 1997	General Manager of Tokyo Branch and Head of Investment Banking, Union Bank of Switzerland
June 1998	Head of Investment Banking and Managing Director, UBS Securities Japan Co., Ltd.
April 2011	Visiting Professor of Graduate School of International Corporate Strategy (currently Department of International Corporate Strategy, Graduate School of Business Administration), Hitotsubashi University
May 2012	External Director of PARCO CO., LTD.
October 2012	Professor of Graduate School of International Corporate Strategy (currently Department of International Corporate Strategy, Graduate School of Business Administration), Hitotsubashi University
June 2014	Outside Director of Aozora Bank, Ltd. (current position)
June 2016	Director (Outside Director) of the Company (current position)
April 2020	Visiting Professor of Department of International Corporate Strategy, Graduate School of Business Administration, Hitotsubashi University (current position)

#### Reason for selection

Tomonori Ito has abundant experience in investment banking business both inside and outside Japan and distinguished knowledge acquired through research in financial theory at the Department of International Corporate Strategy, Graduate School of Business Administration, Hitotsubashi University.

#### Main activities during fiscal 2019

He attended 12 of 12 meetings of the Board of Directors and made comments primarily based on his abundant experience in investment banking business both inside and outside Japan and distinguished knowledge and abundant experience acquired through research in financial theory.

#### John Buchanan (b. October 31, 1951)

Career summary	
October 1974	Joined Lloyds Bank Group (Bank of London and South America, Lloyds Bank International, Lloyds Merchant Bank)
January 1981	Representative, subsequently Branch Manager, Lloyds Bank International, Osaka
August 1983	Branch Manager, Bank of London and South America, Barcelona
October 1987	Joined S.G. Warburg & Co. Ltd.
October 1992	Director of S.G. Warburg & Co. Ltd.
October 1995	Joined The Sumitomo Bank, Limited, London Branch
May 2000	Joined Daiwa Securities SB Capital Markets Europe Limited
August 2006	Research Associate of Centre for Business Research, University of Cambridge (current position)
June 2016	Director (Outside Director) of the Company (current position)

#### Reason for selection

John Buchanan has abundant experience in investment advisory business both inside and outside Japan as well as distinguished knowledge acquired through research concerning corporate governance at the University of Cambridge.

#### Main activities during fiscal 2019

He attended 12 of 12 meetings of the Board of Directors and made comments primarily based on his abundant experience in investment advisory business both inside and outside Japan and distinguished knowledge and abundant experience acquired through research concerning corporate governance.

### Independent Outside Audit & Supervisory Board Members

#### Hiroshi Fujioka (b. June 2, 1954)

Career summary	
April 1977	Joined the Ministry of Finance
July 2008	Director-General of Customs and Tariff Bureau, the Ministry of Finance
July 2009	Director-General for Policy Planning, the Ministry of Land, Infrastructure, Transport and Tourism
January 2012	Senior Executive Vice President of Japan Housing Finance Agency (Incorporated Administrative Agency)
January 2014	Councilor of the Minister's Secretariat, the Ministry of Finance
June 2014	Audit & Supervisory Board Member (Outside Audit & Supervisory Board Member) of the Company
June 2015	Senior Audit & Supervisory Board Member (Outside Audit & Supervisory Board Member) of the Company (current position)
June 2016	Outside Corporate Auditor of The Nishi-Nippon City Bank, Ltd.
October 2016	Audit and Supervisory Committee Member (Outside Director) of The Nishi-Nippon City Bank, Ltd. (current position)

#### Reason for selection

Hiroshi Fujioka has distinguished knowledge and abundant experience acquired through many years of work in the government.

#### Main activities during fiscal 2019

He attended 12 of the 12 meetings of the Board of Directors and 12 of the 12 meetings of the Audit & Supervisory Board, and made comments primarily based on his distinguished knowledge and abundant experience in fiscal and financial administration, etc.

#### Mutsutake Otsuka (b. January 5, 1943)

Career summary	
April 1965	Joined Japanese National Railways
April 1987	Joined East Japan Railway Company, General Manager of Finance Department
June 1990	Director and General Manager of Personnel Department of East Japan Railway Company
June 1992	Executive Director and General Manager of Personnel Department of East Japan Railway Company
June 1997	Executive Vice President and Representative Director and Director General of Corporate Planning Headquarters of East Japan Railway Company
June 2000	President and Representative Director of East Japan Railway Company
April 2006	Chairman and Director of East Japan Railway Company
April 2007	Temporary Audit & Supervisory Board Member (Outside Audit & Supervisory Board Member) of the Company
June 2007	Audit & Supervisory Board Member (Outside Audit & Supervisory Board Member) of the Company (current position)
May 2011	Vice Chairman of Nippon Keidanren
April 2012	Advisor of East Japan Railway Company
June 2013	Outside Director of JX Holdings, Inc. (currently ENEOS Holdings, Inc.) (current position)
June 2014	Outside Director of NIPPON STEEL & SUMITOMO METAL CORPORATION (currently NIPPON STEEL CORPORATION)
June 2020	Counsel of East Japan Railway Company (current position)

#### Reason for selection

Mutsutake Otsuka has distinguished knowledge and abundant experience as a director of a listed company.

#### Main activities during fiscal 2019

He attended 12 of the 12 meetings of the Board of Directors and 12 of the 12 meetings of the Audit & Supervisory Board and made comments primarily based on his distinguished knowledge and abundant experience in the management of a listed company.

#### Kiyoshi Nakanishi (b. April 2, 1945)

Career summary	
April 1970	Joined Toyota Motor Co., Ltd.
January 1997	General Manager of No. 3 Engine Technical Department of No. 4 Development Center of TOYOTA MOTOR CORPORATION
June 2000	Director of TOYOTA MOTOR CORPORATION
June 2003	Managing Officer of TOYOTA MOTOR CORPORATION
June 2004	Adviser of TOYOTA MOTOR CORPORATION
June 2004	Representative Director of GENESIS RESEARCH INSTITUTE, INC.
June 2010	Adviser of GENESIS RESEARCH INSTITUTE, INC.
June 2010	Adviser of Toyota Central R&D Labs, Inc.
June 2010	Audit & Supervisory Board Member of TOYOTA TECHNO CRAFT Co., LTD. (currently TOYOTA CUSTOMIZING & DEVELOPMENT Co., Ltd.)
June 2011	Audit & Supervisory Board Member (Outside Audit & Supervisory Board Member) of the Company (current position)

#### Reason for selection

Kiyoshi Nakanishi has distinguished knowledge and abundant experience as a director of a listed company.

#### Main activities during fiscal 2019

He attended 12 of the 12 meetings of the Board of Directors and 12 of the 12 meetings of the Audit & Supervisory Board and made comments primarily based on his distinguished knowledge and abundant experience in the management of a listed company.



#### Executive Officers (As of August 1, 2020)

President and Chief Executive Officer	<b>Toshifumi Watanabe</b>			
Executive Vice Presidents	<b>Akihito Urashima</b>	General operations Department Director of Nuclear Power Business (delegation of administrative works)		
	<b>Yoshiki Onoi</b>	General operations Department Director of International Business (delegation of administrative works)		
	<b>Hiromi Minaminosono</b>	General operations Department Deputy Director of Nuclear Power Business (delegation of administrative works) Secretarial Affairs Dept., Public Relation Dept., Personnel & Employee Relations Dept., General Affairs Dept., Siting & Environment Dept.		
	<b>Makoto Honda</b>	General operations Department Deputy Director of International Business (delegation of administrative works) Corporate Planning & Administration Dept., Accounting & Finance Dept., Procurement Dept.		
	<b>Hiroyasu Sugiyama</b>	General operations Department Director of Renewable Energy (delegation of administrative works) Department Deputy Director of Nuclear Power Business (delegation of administrative works) Digital Innovation Dept., Civil & Architectural Engineering Dept., Thermal Energy & Value Creation Dept., Research & Development Dept.		
Executive Managing Officers	<b>Hitoshi Kanno</b> <b>Takaya Nomura</b>	<b>Yoshikazu Shimada</b> <b>Osamu Hagiwara</b>	<b>Hiroshi Sasatsu</b> <b>Ryoji Sekine</b>	<b>Isshu Kurata</b>
Executive Officers	<b>Takashi Jahana</b> <b>Kazuo Ito</b>	<b>Toshiya Sato</b> <b>Takashi Fujita</b>	<b>Shinichi Demachi</b> <b>Shoichi Echigo</b>	<b>Yasushi Ishida</b>

## Compliance & Risk Management

J-POWER, in accordance with its Corporate Philosophy, has established the Corporate Conduct Rules as the core of its compliance activities, outlining basic rules for behavior in line with the spirit of compliance and business ethics to be observed in the course of business operations. In addition, the Company has established its Compliance Action Guidelines as criteria for determining specific actions by individual employees, including members of management, when conducting business activities.

The Company distributes these documents to all employees and works to encourage compliance awareness by having employees sign and keep with them a copy of the Compliance Pledge.

Directors adhere to the Corporate Philosophy, Corporate Conduct Rules, and Compliance Action Guidelines, set an example for honest and fair conduct based on a steadfast spirit of compliance and business ethics, and instill these values in employees.

In addition, the Board of Directors regularly receives reports on the status of business execution in order to keep up to date on risks, including ESG-related risks. The Company incorporates mutual checks and balances in the internal decision-making process, undertakes reviews in various meetings and committees, and always maintains risk management frameworks in accordance with Company regulations. This structure ensures measures are implemented to recognize and avoid risks in the conduct of business activities and minimizes losses when risks actualize.

### Compliance Promotion Structure

The Company's compliance is overseen by the Chairman. An officer in charge of compliance implements compliance promotion programs and assists the Chairman and President. The Compliance Action Committee, chaired by the Chairman, has been established to discuss company-wide compliance promotion measures, evaluate their implementation status, and address issues related to compliance violations. With the participation of group companies, the committee implements measures for the entire J-POWER Group. Two task forces have also been established to quickly and accurately promote operations pertaining to compliance promotion, one for company-wide compliance promotion and the other for autonomous safety activities based on the Company's safety regulations. These task forces, which are led by Executive Officers who have relevant expertise, confirm the implementation status of compliance promotion activities.

At major offices, power plants, and Group companies throughout Japan, individual compliance committees have been established to implement compliance activities suited to the characteristics of their respective business units.

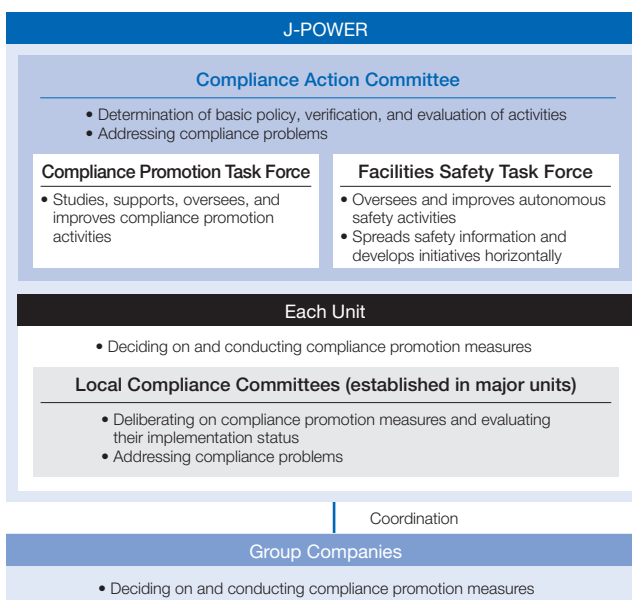
### Compliance Promotion Activities

The Compliance Action Committee utilizes a PDCA (plan-do-check-act) method for compliance promotion, formulating a plan for each fiscal year, evaluating results at the end of that fiscal year, and formulating the next year's plan based on the results. The compliance promotion plan and results are reported to the Board of Directors.

To raise compliance awareness among employees, the Company issues notifications of changes in laws and regulations, presents compliance-related case studies, and conducts training sessions on laws and regulations related to its business and on compliance issues.

When alleged compliance violations occur, the Compliance Action Committee investigates the facts and causes surrounding the issues and takes appropriate action as necessary, including issuing directives for improvement or measures to prevent their recurrence.

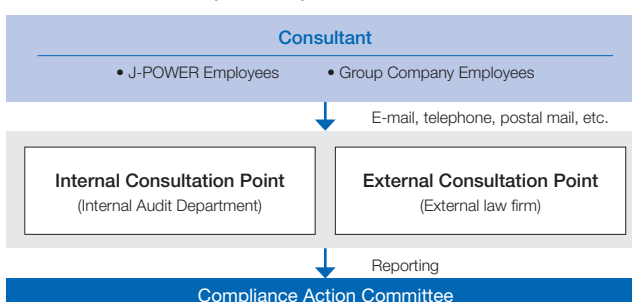
### The J-POWER Group's Compliance Promotion System



### Compliance Consultation Points (Whistle-Blowing System)

The J-POWER Group has established Compliance Consultation Points at the Internal Audit Department, at an external law firm, and at key subsidiaries to serve as consulting hotlines in the event that employees face compliance issues. The Group makes employees aware of these channels. Employees who use these resources are rigorously protected.

### The J-POWER Group's Compliance Consultation Points



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## Compliance Survey

The J-POWER Group conducts an annual survey of all employees in an effort to understand compliance-related risks. Compliance Consultation Points contact respondents whose responses indicate problems to gather additional information. The survey also seeks out employee opinions on workplace conditions, communication, and work volume on an ongoing basis. These results are shared with operating units and used to improve workplace environments.

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## Barring Relations with Anti-Social Forces

The J-POWER Group's policy is to not maintain relations of any sort with the anti-social forces that threaten the order and safety of civil society. The Company has designated an internal department to act as a point of contact in the event that demands or other contacts are received from anti-social forces and has established a system that ensures the quick collection of information and appropriate response in cooperation with specialist external agencies.

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## Preventing Bribery and Corruption

The J-POWER Group prohibits bribes, illicit payments, and illegal political donations, as well as entertaining or giving gifts to public officials that conflict with the National Public Service Ethics Act or rules prescribed by government agencies. Also, the Company does not offer financial or other rewards to foreign government officials in return for illicit benefits or accommodations. We are careful to avoid actions that might be construed as collusion with politicians or administrative agencies and strive to establish sound and transparent relationships.

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## Disclosure

The Company has established the Disclosure Committee, chaired by the President, to enhance transparency and accountability in corporate activities. This committee ensures the fair and transparent disclosure of company information in a timely and proactive manner.

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## Compliance with the Internal Control Reporting System

In response to the internal control reporting system for financial reporting required by Japan's Financial Instruments and Exchange Act, the J-POWER Group established, maintains, and evaluates its internal control system, mainly through the Accounting & Finance Department and Internal Audit Department.

In fiscal 2019, continuing from the previous year, the Company's management evaluated the status of the development and operation of internal controls with respect to company-wide internal controls, operational process-related internal controls, and information technology-based internal controls in accordance with the implementation standards of Japan's Financial Services Agency. The Company determined that its internal control system for financial reporting is effective. This evaluation result was submitted as an Internal Control Report to the Director-General of the Kanto Finance Bureau in June 2020 following an audit carried out by the Company's Independent Auditor.

Going forward, the J-POWER Group will continue efforts to ensure the reliability of its financial reporting.

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### Corporate Conduct Rules (Revised on April 1, 2004)

#### Reliable Supply of Energy

We will put forth every effort to reliably supply energy both in Japan and abroad, utilizing our experienced personnel and cutting-edge technology.

#### Safety Assurance

In conducting operations, we will constantly work to raise safety awareness and give the highest priority to public and worker safety.

#### Environmental Conservation

Based on the awareness that our business operations are deeply linked with the environment, we will actively engage in environmental conservation activities.

#### Communication with Society

To establish communication with society, we will conduct information disclosure and public relations activities in a fair and transparent manner.

#### Contribution to Society

Aiming to be a good corporate citizen, we will undertake activities to contribute to society and assist in the development of local communities both in Japan and abroad.

#### Creation of a Rewarding Corporate Culture

In addition to providing safe and comfortable work environments, we will respect the individuality of our employees and endeavor to establish a rewarding corporate culture that encourages them to take on new challenges.

#### Compliance with Laws, Regulations, and Corporate Ethics

We will conduct business in good faith and in a fair manner with a strong commitment to compliance and ethics. We will stand firm against anti-social forces that threaten the order and safety of civil society.

#### Role of top Management

Recognizing its responsibility in putting into practice the spirit of these Corporate Conduct Rules, our top management must set an example for others and work to spread awareness of these rules.

Should an event occur that violates the spirit of these rules, top management must take the initiative in dealing with the problem to determine the causes and prevent its recurrence. Top management must also identify and take disciplinary action against those responsible, including its own members.



# Emergency Management

## Emergency Management Measures

The J-POWER Group has a responsibility as an electric utility company to ensure a stable supply of electricity, which plays an essential role in people's everyday lives. We need to prevent damage to the equipment that produces and transmits electric power and to restore service quickly should a disruption occur. Accordingly, the J-POWER Group implements the following measures.

- (1) Installation of appropriate facilities and development of disaster recovery systems in preparation for natural disasters, including earthquakes, typhoons, lightning strikes, and tsunami
- (2) Enhancement of security to prevent malicious and violent conduct
- (3) Enhancement of regular facility inspections to prevent major impediments to electric power supply and appropriate repairs and upgrades in response to aging, the decline of function, and breakdowns
- (4) Preparation of action plans for responding to pandemics and other events that could have a major impact on business operations

## Emergency Management Systems

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

### (1) Emergency Response Team

The Emergency Response Team is a permanent organization at the J-POWER Headquarters. The team forecasts emergencies, immediately takes first-response action in the case of an occurrence, and oversees emergency management operations.

The team conducts safety reporting drills for Group employees several times a year.

### (2) Emergency Managers and Emergency Duty Personnel

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

### (3) Emergency Response Headquarters and Branches

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

Every year, the Emergency Response Headquarters and Branches in the J-POWER Headquarter and local units carry out coordinated comprehensive disaster drills.

### Emergency Response Headquarters Structure (Head Office)

Structure	Composition
Chairman	President
Deputy Chairman	Executive Vice President
Members	Executive Officers in charge of General Affairs Dept. and related Executive Officers Department Directors of General Affairs Dept., Public Relation Dept., and other related departments
Emergency Management Task Force	Emergency Response Team and related departments
(Composition of Task Force)	(Division of Duties)
1. Communication	Communication, collection, and management of information
2. Analysis/Evaluation	Analysis, evaluation, response planning
3. Response	Restoration, liaison, response to victims, response to consumers, IR-related information
4. Public Relations	Relations with media
5. Advisers	Provide advice regarding analysis, evaluation, response planning, etc.

## Disaster Prevention and Business Continuity

J-POWER, as an electric utility company responsible for vital lifelines, is a designated public institution under the Basic Act on Disaster Control Measures.

Accordingly, the Company has established physical measures assuming a large-scale natural disaster as well as non-physical measures, such as various rules for when disasters occur and a systematic disaster preparedness structure from the head office to local units. By actively implementing these measures, the Company has reinforced its disaster preparedness structure to ensure the continuation of business even in the event of a natural disaster exceeding assumptions.



A head office comprehensive disaster drill

## Response to COVID-19

In light of the spread of COVID-19, J-POWER has established the COVID-19 Response Headquarters headed by the President and set up a framework for preventing infection and implementing measures to prevent the spread of COVID-19 in and outside the Company.

We are implementing contagion prevention measures, including remote working, staggered working hours, and the utilization of video conferencing. We are also taking steps to avoid contact between plant operators, who are especially important to the continuity of stable power supply, and other employees. In addition, we have put in place measures to secure substitute operators within the same business units and from other business units in case such an operator is infected. We are also confirming, as needed, risks related to difficulties in procuring the fuel and other materials necessary to maintain and operate power plants.

## Information Security

With advancements in the utilization of IT by corporations, information security has become increasingly important in light of the increase in instances of cyberattacks targeting specific companies and other threats. As an important infrastructure company that is responsible for ensuring a stable power supply in Japan and overseas and the construction of a nuclear power plant, it is imperative that the J-POWER Group ensure an especially high level of information security.

Furthermore, ensuring the security of important systems, such as electric power control systems, is growing ever more important to maintaining a stable power supply.

The J-POWER Group has established a Basic Policy on Information Security and formulates and implements annual plans with specific measures based on activities in the previous fiscal year.

Of note, the Company is strengthening its collaboration with relevant government agencies and the electric power industry overall, contributing to the stable supply of electric power from an IT perspective. The Company is implementing robust information security measures in constructing the Ohma Nuclear Power Plant, with its IT and nuclear power divisions working in close coordination.

Note: Please refer to the J-POWER website for more information on the Basic Policy on Information Security and information security measures.

► <https://www.jpowers.co.jp/english/privacy/>





# FINANCIAL SECTION/ FACT DATA

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# Financial and Operating Highlights

	2011/3	2012/3	2013/3	2014/3	2015/3
<b>Consolidated: Operating Revenue/Expenses Comparison</b>					
<b>Operating Revenue</b>	<b>635,975</b>	<b>654,600</b>	<b>656,056</b>	<b>706,835</b>	<b>750,627</b>
Electric Utility Operating Revenue	584,436	609,775	605,338	609,080	588,184
Hydroelectric (Wholesale Electric Power Business)	108,152	108,479	106,681	104,765	105,705
Thermal (Wholesale Electric Power Business)	406,488	424,436	413,938	411,850	389,192
Other Electric Power Business	13,723	22,371	30,707	37,875	41,707
Overseas Business Operating Revenue* <sup>1</sup>	1,881	2,005	1,647	42,834	108,916
Other Business Operating Revenue* <sup>2</sup>	49,657	42,819	49,070	54,920	53,526
<b>Operating Expenses</b>	<b>565,387</b>	<b>604,800</b>	<b>601,490</b>	<b>647,663</b>	<b>677,767</b>
<b>Operating Income</b>	<b>70,588</b>	<b>49,800</b>	<b>54,566</b>	<b>59,171</b>	<b>72,859</b>
<b>Non-Operating Income</b>	<b>14,965</b>	<b>15,356</b>	<b>17,577</b>	<b>22,357</b>	<b>22,714</b>
Share of Profit of Entities Accounted for Using Equity Method	9,072	9,565	11,728	16,380	15,659
Other	5,893	5,790	5,849	5,976	7,054
<b>Non-Operating Expenses</b>	<b>29,231</b>	<b>28,536</b>	<b>27,318</b>	<b>41,451</b>	<b>36,223</b>
Interest Expenses	22,371	22,005	22,362	25,305	28,224
Foreign Exchange Losses	—	—	991	11,190	1,547
Other	6,860	6,530	3,964	4,955	6,451
<b>Ordinary Income</b>	<b>56,322</b>	<b>36,619</b>	<b>44,825</b>	<b>40,077</b>	<b>59,350</b>
Extraordinary Income	1,635	—	—	2,386	2,127
Extraordinary Losses	19,176	3,382	—	—	—
<b>Profit Attributable to Owners of Parent</b>	<b>19,583</b>	<b>16,113</b>	<b>29,808</b>	<b>28,694</b>	<b>43,206</b>
Average Exchange Rates (Yen/US\$)	85.74	79.08	82.91	100.17	109.76
Foreign Exchange Rate at December 31 (Yen/THB)	2.70	2.45	2.82	3.20	3.67
Foreign Exchange Rate at December 31 (THB/US\$)	30.15	31.69	30.63	32.81	32.96

## Consolidated: Electricity Sales Volume

<b>Electric Power Business</b>	<b>65,815</b>	<b>66,084</b>	<b>65,605</b>	<b>65,421</b>	<b>64,049</b>
Hydroelectric (Wholesale Electric Power Business)	10,267	10,318	9,032	8,759	9,028
Thermal (Wholesale Electric Power Business)	54,086	53,756	54,333	54,316	52,577
Other Electric Power Businesses	1,462	2,010	2,239	2,345	2,442
<b>Overseas Business*<sup>4</sup></b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,665</b>	<b>8,678</b>
Domestic Hydroelectric: Water Supply Rate	106%	115%	102%	99%	98%
Domestic Thermal: Load Factor	78%	77%	78%	79%	76%

\*<sup>1</sup> Revenue of the overseas business segment (including revenue of overseas consolidated subsidiaries, overseas consulting businesses, etc.)

\*<sup>2</sup> "Other Businesses Operating Revenue" is composed of revenues of "Electric Power-Related Business" and "Other Business."

\*<sup>3</sup> Electric power sales volume of electricity procured from wholesale electricity market, etc.

\*<sup>4</sup> Electric power sales volume of overseas consolidated subsidiaries (Electric power sales volume of equity method affiliates is not included.)

(Millions of yen)

2016/3

(Millions of yen)

2017/3

2018/3

2019/3

2020/3

**Consolidated: Operating Revenue/Expenses Comparison**

<b>780,072</b>	<b>Operating Revenue</b>	<b>744,402</b>	<b>856,252</b>	<b>897,366</b>	<b>913,775</b>
570,837	Electric Utility Operating Revenue	538,558	631,923	693,790	684,155
109,034	Electric Power Generation Business	487,263	577,861	642,409	631,011
380,382	Transmission/ Transformation Business	49,021	48,679	49,497	49,673
30,265	Overseas Business Operating Revenue* <sup>1</sup>	149,888	163,084	141,024	179,094
155,952	Other Business Operating Revenue* <sup>2</sup>	55,955	61,244	62,551	50,525
53,282					
<b>692,157</b>	<b>Operating Expenses</b>	<b>662,675</b>	<b>751,916</b>	<b>818,521</b>	<b>830,136</b>
<b>87,915</b>	<b>Operating Income</b>	<b>81,726</b>	<b>104,336</b>	<b>78,844</b>	<b>83,638</b>
<b>17,871</b>	<b>Non-Operating Income</b>	<b>20,526</b>	<b>29,113</b>	<b>18,894</b>	<b>26,537</b>
10,889	Share of Profit of Entities Accounted for Using Equity Method	13,258	9,721	9,657	11,320
6,981	Other	7,268	19,392	9,237	15,217
<b>47,248</b>	<b>Non-Operating Expenses</b>	<b>35,103</b>	<b>30,974</b>	<b>29,200</b>	<b>32,091</b>
30,495	Interest Expenses	29,798	28,387	26,377	26,293
12,888	Other	5,304	2,586	2,822	5,797
3,865					
<b>58,538</b>	<b>Ordinary Income</b>	<b>67,150</b>	<b>102,476</b>	<b>68,539</b>	<b>78,085</b>
—	Extraordinary Losses	—	3,389	—	12,497
—					
<b>40,081</b>	<b>Profit Attributable to Owners of Parent</b>	<b>41,429</b>	<b>68,448</b>	<b>46,252</b>	<b>42,277</b>
120.15	Average Exchange Rates (Yen/US\$)	108.34	110.85	110.92	108.70
3.34	Foreign Exchange Rate at December 31 (Yen/THB)	3.24	3.45	3.41	3.63
36.09	Foreign Exchange Rate at December 31 (THB/US\$)	35.83	32.68	32.45	30.15

(Million kWh)

67,317

(Million kWh)

**Consolidated: Electricity Sales Volume**

<b>67,317</b>	<b>Electric Power Business</b>	<b>62,791</b>	<b>67,090</b>	<b>69,356</b>	<b>73,131</b>
10,322	Hydroelectric	8,508	9,247	9,709	9,196
55,010	Thermal	53,513	56,782	54,946	52,053
1,985	Wind	769	824	815	865
	Other* <sup>3</sup>	—	235	3,886	11,016
<b>13,896</b>	<b>Overseas Business*<sup>4</sup></b>	<b>14,687</b>	<b>15,871</b>	<b>10,927</b>	<b>15,640</b>
111%	Domestic Hydroelectric: Water Supply Rate	92%	105%	106%	101%
80%	Domestic Thermal: Load Factor (non-consolidated)	75%	80%	79%	77%

## Financial and Operating Highlights

	2011/3	2012/3	2013/3
<b>Consolidated: Balance Sheet Items</b>			
Noncurrent Assets	1,842,658	1,849,786	1,975,202
Electric Utility Plant and Equipment	1,178,492	1,111,251	1,058,849
Overseas Business Facilities	—	—	14,311
Other Noncurrent Assets	64,920	65,657	104,529
Construction in Progress	301,676	380,425	464,674
Nuclear Fuel	46,693	54,157	59,769
Investments and Other Assets	250,875	238,295	273,067
Current Assets	169,727	166,607	194,707
<b>Total Assets</b>	<b>2,012,386</b>	<b>2,016,394</b>	<b>2,169,909</b>
Interest-Bearing Debt	1,429,037	1,435,736	1,523,059
Other	168,450	174,465	192,964
<b>Total Liabilities</b>	<b>1,597,487</b>	<b>1,610,202</b>	<b>1,716,024</b>
Shareholders' Equity	435,760	441,369	460,673
Accumulated Other Comprehensive Income	(19,997)	(33,985)	(6,768)
Non-Controlling Interests	(863)	(1,191)	(19)
<b>Total Net Assets</b>	<b>414,898</b>	<b>406,192</b>	<b>453,885</b>
<b>Consolidated: Cash Flow Items</b>			
<b>Net Cash Provided by (Used in) Operating Activities</b>	<b>151,236</b>	<b>125,891</b>	<b>119,786</b>
Profit before Income Taxes	38,739	33,237	45,176
(Reference) Depreciation and Amortization Cost on a Non-Consolidated Basis	106,080	100,423	89,485
<b>Net Cash Provided by (Used in) Investing Activities</b>	<b>(124,675)</b>	<b>(136,852)</b>	<b>(170,369)</b>
Purchase of Noncurrent Assets	(115,827)	(133,711)	(165,201)
Payments of Investment and Loans Receivable	(14,184)	(6,068)	(1,347)
(Reference) CAPEX on a Non-Consolidated Basis	(73,796)	(68,493)	(66,262)
<b>Free Cash Flow</b>	<b>26,560</b>	<b>(10,960)</b>	<b>(50,582)</b>
<b>Consolidated: Financial Indicators</b>			
Return on Assets (ROA)	2.8%	1.8%	2.1%
ROA (after exclusion of the construction in progress of tangible fixed assets)	3.3%	2.2%	2.7%
Return on Equity (ROE)	4.7%	3.9%	6.9%
Net Income per Share (EPS) (Yen)	130.51	107.39	198.65
Net Assets per Share (BPS) (Yen)	2,770.77	2,714.94	3,024.98
Equity Ratio	20.7%	20.2%	20.9%
Debt-Equity Ratio	3.4	3.5	3.4
Number of Common Shares Issued at the End of the Period (excluding treasury stock) (Thousands)	150,053	150,053	150,052

(Millions of yen)

2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3
2,149,579	2,275,453	2,232,286	2,271,046	2,325,256	2,401,671	2,471,347
1,023,751	986,552	948,252	958,754	951,149	944,323	965,082
125,018	264,800	357,448	332,010	341,418	312,128	316,333
109,787	115,111	101,827	92,501	93,404	94,836	90,924
512,604	506,967	441,080	476,171	525,740	582,083	647,160
69,216	71,467	73,447	73,682	73,800	74,514	74,812
309,201	330,555	310,231	337,926	339,743	393,785	377,033
235,636	383,695	308,436	335,239	321,798	364,508	334,043
<b>2,385,216</b>	<b>2,659,149</b>	<b>2,540,723</b>	<b>2,606,285</b>	<b>2,647,054</b>	<b>2,766,179</b>	<b>2,805,390</b>
1,649,993	1,723,659	1,628,783	1,620,082	1,561,361	1,642,867	1,648,442
215,745	239,191	236,506	222,183	249,568	277,729	299,560
<b>1,865,739</b>	<b>1,962,851</b>	<b>1,865,289</b>	<b>1,842,266</b>	<b>1,810,929</b>	<b>1,920,597</b>	<b>1,948,003</b>
478,860	629,463	650,817	689,542	745,176	777,699	806,197
37,350	59,268	15,775	34,276	42,114	19,760	1,567
3,265	7,566	8,839	40,200	48,833	48,123	49,623
<b>519,477</b>	<b>696,298</b>	<b>675,433</b>	<b>764,019</b>	<b>836,124</b>	<b>845,582</b>	<b>857,387</b>
<b>122,110</b>	<b>147,813</b>	<b>146,130</b>	<b>115,440</b>	<b>160,310</b>	<b>148,423</b>	<b>159,245</b>
42,770	61,598	58,421	67,150	99,086	68,539	65,587
81,500	77,824	73,475	49,696	53,469	51,050	52,702
<b>(177,375)</b>	<b>(142,964)</b>	<b>(131,541)</b>	<b>(137,663)</b>	<b>(109,635)</b>	<b>(170,432)</b>	<b>(161,711)</b>
(176,982)	(148,404)	(140,840)	(108,149)	(98,816)	(106,009)	(149,520)
(1,149)	(4,429)	(2,537)	(18,005)	(8,149)	(74,457)	(10,912)
(86,554)	(61,119)	(106,386)	(99,844)	(94,159)	(88,924)	(90,821)
<b>(55,264)</b>	<b>4,848</b>	<b>14,588</b>	<b>(22,223)</b>	<b>50,674</b>	<b>(22,008)</b>	<b>(2,466)</b>
1.8%	2.4%	2.3%	2.6%	3.9%	2.5%	2.8%
2.2%	2.9%	2.8%	3.2%	4.8%	3.2%	3.6%
5.9%	7.2%	5.9%	6.0%	9.1%	5.8%	5.3%
191.23	284.43	218.97	226.33	373.93	252.68	230.96
3,440.23	3,762.52	3,641.59	3,954.22	4,300.98	4,356.54	4,412.84
21.6%	25.9%	26.2%	27.8%	29.7%	28.8%	28.8%
3.2	2.5	2.4	2.2	2.0	2.1	2.0
150,051	183,050	183,049	183,049	183,049	183,048	183,048



## Financial and Operating Highlights

		2011/3	2012/3	2013/3	2014/3	2015/3
Non-Consolidated: Operating Revenue/Expenses						
Operating Revenue		583,213	599,973	586,993	582,861	557,943
Electric Utility Operating Revenue		573,878	590,553	577,284	572,937	548,580
Hydroelectric		108,152	108,479	106,681	104,765	105,705
Thermal		406,488	424,436	413,938	411,935	389,607
Transmission and Other		59,237	57,638	56,664	56,236	53,267
Incidental Business Operating Revenue		9,335	9,419	9,708	9,923	9,363
Operating Expenses		520,569	557,628	543,659	542,396	513,387
Electric Utility Operating Expenses		513,395	549,010	534,765	533,444	504,946
Personnel Expenses		31,276	34,441	34,084	29,810	28,566
Amortization of the Actuarial Difference		(2,213)	1,752	505	(3,099)	(4,372)
Fuel Cost		209,967	238,497	238,441	250,259	228,482
Repair Expenses		50,635	54,286	56,454	58,521	61,005
Depreciation and Amortization Cost		106,080	100,423	89,485	81,500	77,824
Other		115,435	121,362	116,299	113,352	109,067
Incidental Business Operating Expenses		7,174	8,617	8,894	8,952	8,441
Operating Income		62,644	42,344	43,333	40,464	44,555
[Amortization of the Actuarial Difference]						
Actuarial Difference	The Remainders in the Previous Year	1,574	(1,022)	809	233	(1,431)
	Actuarial Difference in the Present Year	—	—	—	—	—
	Actuarial Difference in the Previous Year	(4,811)	3,584	(70)	(4,746)	(4,960)
	Subtotal	(3,236)	2,561	738	(4,530)	(6,392)
Amortization		(2,213)	1,752	505	(3,099)	(4,372)
The Remainders in the Present Year		(1,022)	809	233	(1,431)	(2,019)
[Repair Expenses]						
Hydroelectric		8,112	13,039	11,340	11,776	13,391
Thermal		38,765	35,733	40,438	41,942	42,382
Transmission/Transformation		2,259	3,761	3,161	3,205	3,671
Other		1,496	1,753	1,513	1,596	1,558
Total		50,635	54,286	56,454	58,521	61,005
[Depreciation and Amortization Cost]						
Hydroelectric		23,553	23,418	21,852	21,318	20,947
Thermal		61,318	56,707	48,411	40,879	37,982
Transmission/Transformation		16,849	16,053	15,302	15,074	14,395
Other		4,359	4,242	3,919	4,226	4,500
Total		106,080	100,423	89,485	81,500	77,824

(Millions of yen)

(Millions of yen)

2016/3

2017/3

2018/3

2019/3

2020/3

**Non-Consolidated: Operating Revenue/Expenses**

552,341	Operating Revenue		552,460	614,591	646,958	571,291
543,019	Electric Utility Operating Revenue		510,909	601,475	633,617	563,813
109,034	Sold power to other suppliers		457,953	545,659	580,652	510,429
381,201	Transmission and Other		52,955	55,816	52,964	53,383
52,783	Incidental Business Operating Revenue		11,551	13,115	13,340	7,478
9,322	Operating Expenses		494,829	571,519	628,279	546,405
510,770	Electric Utility Operating Expenses		484,288	559,300	615,712	539,708
502,326	Personnel Expenses		43,657	34,205	32,494	35,861
31,811	Amortization of the Actuarial Difference		10,726	(103)	(1,463)	2,411
(2,308)	Fuel Cost		196,843	257,308	289,024	233,234
218,481	Repair Expenses		68,348	63,458	69,715	66,652
58,325	Depreciation and Amortization Cost		49,696	53,469	51,050	52,702
73,475	Other		125,743	150,858	173,427	151,257
120,231	Incidental Business Operating Expenses		10,540	12,219	12,567	6,697
8,444	Operating Income		27,630	43,071	18,678	24,886
41,570						
	[Amortization of the Actuarial Difference]					
	Actuarial Difference	The Remainders in the Previous Year	(1,066)	4,955	(47)	(675)
(2,019)		Actuarial Difference in the Present Year	—	—	—	—
—		Actuarial Difference in the Previous Year	16,748	(5,106)	(2,092)	4,201
(1,354)		Subtotal	15,682	(150)	(2,139)	3,525
(3,374)	Amortization		10,726	(103)	(1,463)	2,411
(2,308)	The Remainders in the Present Year		4,955	(47)	(675)	1,114
(1,066)						
	[Repair Expenses]					
	Hydroelectric		11,915	11,996	16,865	12,927
12,160	Thermal		50,770	46,027	45,238	47,216
40,985	Transmission/Transformation		3,948	3,924	5,950	4,816
3,495	Other		1,713	1,510	1,660	1,690
1,683	Total		68,348	63,458	69,715	66,652
58,325						
	[Depreciation and Amortization Cost]					
	Hydroelectric		13,245	15,174	14,382	14,766
20,640	Thermal		23,007	24,318	23,093	23,934
33,409	Transmission/Transformation		10,068	10,516	10,033	10,249
13,871	Other		3,373	3,459	3,541	3,751
5,553	Total		49,696	53,469	51,050	52,702
73,475						

# Management's Discussion and Analysis

## Financial Results

### Operating Income

Sales (operating revenue) increased 1.8% from the previous fiscal year to ¥913.7 billion mainly due to an increase in the electricity sales volume in the overseas business.

Operating expenses increased 1.4% from the previous fiscal year to ¥830.1 billion. This was mainly due to an increase in purchased power from other suppliers and an increase in fuel costs

in the overseas business, despite a decrease in fuel costs associated with a decrease in the load factor of thermal power plants in the electric power business.

As a result, operating income increased 6.1% from the previous fiscal year to ¥83.6 billion, with the operating income margin rising 0.4 of a percentage point to 9.2%.

### Ordinary Income

Ordinary revenue, the sum of operating revenue and non-operating income, increased 2.6% from the previous fiscal year to ¥940.3 billion. Ordinary expenses, the sum of operating and non-operating expenses, rose 1.7% from the previous fiscal year to ¥862.2 billion. As a result, ordinary income increased 13.9% from the previous fiscal year to ¥78.0 billion.

Ordinary income by reportable segment for the fiscal year under review was as follows.

#### Electric Power Business

The electricity sales volume from hydroelectric power plants decreased 5.3% from the previous fiscal year to 9.1 TWh, mainly due to the decrease in the water supply rate from 106% to 101%. In thermal power, the decrease in the load factor of thermal power plants of J-POWER (non-consolidated) from 79% to 77% resulted in a 5.3% decrease in electricity sales volume from the previous fiscal year to 52.0 TWh. Despite these factors, an increase in the volume of electricity procured from wholesale electricity market, etc., and sold to retailers contributed to a 5.4% increase in the total electricity sales volume of the electric power business from the previous fiscal year to 73.1 TWh.

Sales (electric utility operating revenue) decreased 1.4% from the previous fiscal year to ¥686.0 billion mainly due to decreases in fuel price and the load factor of thermal power plants, despite the increase in the volume of electricity procured from wholesale electricity market, etc., and sold to retailers.

Segment income increased 83.2% from the previous fiscal year to ¥27.4 billion. This was mainly due to the decrease in fuel costs associated with lower fuel prices and the lower load factor of thermal power plants as well as a decrease in the removal cost of existing facilities, despite an increase in retirement benefit cost.

#### Electric Power-Related Business

Sales (other business operating revenue) decreased 12.0% from the previous fiscal year to ¥400.5 billion mainly due to a decrease in sales of coal at a consolidated subsidiary.

Segment income decreased 30.1% from the previous fiscal year to ¥18.5 billion mainly due to the decrease in sales.

#### Overseas Business

Electricity sales volume in the overseas business increased 43.1% from the previous fiscal year to 15.6 TWh.

Sales (overseas business operating revenue) increased 27.0% from the previous fiscal year to ¥179.0 billion mainly due to the increase in electricity sales volume.

Segment income increased 16.0% from the previous fiscal year to ¥33.9 billion mainly due to the posting of foreign exchange gains.

#### Other Business

Sales (other business operating revenue) decreased 27.0% from the previous fiscal year to ¥22.1 billion.

Segment income decreased 59.0% from the previous fiscal year to ¥0.5 billion.

### Profit before Income Taxes

Profit before income taxes decreased 4.3% (¥2.9 billion) compared with the previous fiscal year to ¥65.5 billion.

### Profit Attributable to Owners of Parent

Total income taxes decreased 9.2% (¥1.2 billion) year on year to ¥11.9 billion, with profit attributable to owners of parent decreasing 8.6% (¥3.9 billion) from the previous fiscal year to ¥42.2 billion.

### Earnings per Share

Earnings per share were ¥230.96 in fiscal 2019, compared with ¥252.68 in the previous fiscal year.

## Dividend Policy

With regard to shareholder returns, in light of industry liberalization and other aspects of the business environment in Japan, we strive to ensure stable, ongoing returns to shareholders, targeting a consolidated payout ratio of around 30%, excluding factors causing short-term profit fluctuations, while considering such factors as profit, results forecasts, and financial position.

For fiscal 2019, the Company paid a total dividend of ¥75 per share, comprising an interim dividend of ¥35 and a year-end

dividend of ¥40 per share. As a result, the payout ratio was 23.9% (consolidated payout ratio: 32.5%), with the ratio of dividends to shareholders' equity at 2.2%.

Of note, the Company stipulates in the Articles of Incorporation that it is able to pay an interim dividend as prescribed by Article 454-5 of the Companies Act.

## Financial Position

### Assets

Total assets increased ¥39.2 billion from the end of the previous fiscal year to ¥2,805.3 billion mainly due to the progress of construction on the Jackson Power Plant in the United States.

### Liabilities

Total liabilities increased ¥27.4 billion from the end of the previous fiscal year to ¥1,948.0 billion. Of this amount, interest-bearing debt increased ¥5.5 billion from the end of the previous fiscal year to ¥1,648.4 billion. Non-recourse loans in the overseas business accounted for ¥269.2 billion of interest-bearing debt.

### Net Assets

Total net assets increased ¥11.8 billion from the end of the previous fiscal year to ¥857.3 billion. This was mainly due to posting of profit attributable to owners of parent, despite a decrease in deferred gains or losses on hedges. The shareholders' equity ratio came to 28.8%.

## Capital Expenditures

Capital expenditures amounted to ¥162.6 billion, an increase of ¥54.9 billion from the previous fiscal year. Of that amount, expenditures in the electric power business amounted to ¥116.9 billion,

an increase of ¥17.0 billion from the previous fiscal year, and expenditures related to the overseas business amounted to ¥27.2 billion, an increase of ¥22.5 billion from the previous fiscal year.

## Fund Procurement

The majority of J-POWER's financing requirements are related to capital expenditures and debt refinancing. As such, the Company's basic policy is to procure long-term funds.

To procure long-term funds, in the interest of ensuring low interest rates and funding stability, the Company issues straight bonds and procures loans from financial institutions. The outstanding balances of straight bonds and borrowings at March 31, 2020, were ¥684.9 billion and ¥945.4 billion, respectively.

For short-term funding, in addition to working capital, the Company obtains flexible bridge financing from the standpoint of enhancing responsiveness in procurement. To meet short-term funding needs, the Company is able to issue up to ¥100.0 billion in commercial paper.

Interest-bearing debt as of March 31, 2020, stood at ¥1,648.4 billion, an increase of ¥5.5 billion from the end of the previous fiscal year.

### Cash Flows

#### Cash Flows from Operating Activities

Cash inflow from operating activities increased ¥10.8 billion from the previous fiscal year to ¥159.2 billion.

#### Cash Flows from Investing Activities

Cash outflow from investing activities decreased ¥8.7 billion from the previous fiscal year to ¥161.7 billion mainly due to the lack of outflow recorded in the previous fiscal year for the acquisition of interest in the UK offshore wind power project, despite increased capital expenditure for the construction of the Jackson Power Plant in the United States.

#### Cash Flows from Financing Activities

Cash flows from financing activities reversed from an inflow of ¥74.6 billion in the previous fiscal year to an outflow of ¥27.7 billion. This was mainly due to a decrease in fund procurement by corporate bond issuance as well as increased cash outflows due to the redemption of corporate bonds and repayment of long-term loans.

As a result of these activities, cash and cash equivalents as of March 31, 2020 decreased ¥29.8 billion from the end of the previous fiscal year to ¥157.2 billion.



## Risk Factors

This section discusses the main potential risks related to J-POWER's financial position, business results, current and future business operations, and other matters. From the perspective of actively disclosing information to investors, this section also provides information to help investors understand business and other risks that the Company does not necessarily consider significant.

### Climate Change

J-POWER owns many coal-fired thermal power plants, which emit a relatively higher level of CO<sub>2</sub> with respect to power output compared to power plants using other fossil fuels, such as LNG. The Company is working to increase the efficiency and reduce the carbon emissions of its coal-fired thermal power with the goal of achieving zero emissions from fossil fuel power generation by 2050.

Also, we are working to expand our use of CO<sub>2</sub>-free renewable energy sources and developing nuclear power plants. Furthermore, we are doing our utmost to achieve the targets set for the overall electric power industry based on the Action Plan for the Electricity Industry for Achieving a Low-Carbon Society established by electricity utilities, including J-POWER, in July 2015.

Japan's target energy mix for 2030 assumes that coal-fired thermal power will account for part of the country's power generation. However, the Japanese government is targeting an 80% reduction in greenhouse gas emissions by 2050, and efforts to realize full decarbonization are accelerating worldwide. If, in response to such developments, new legal regulations or other rules related to climate change countermeasures were to be introduced, causing major changes to business plans or operations, it could have an adverse effect on our financial standing or performance.

### Impact of Reforms to the Electric Power Business

#### Regulations on J-POWER's Electricity Revenue and Business

The Policy on Electricity System Reform was approved by the Cabinet in April 2013, bringing about drastic changes to the business environment surrounding J-POWER. Amendments to the Electricity Business Act fully liberalized market participation in the retail of electric power in April 2016 and eliminated regulations on wholesale electricity utilities (regulations pertaining to business permits and rates). Furthermore, in April 2020, J-POWER and the former EPCOs carried out the legal unbundling of their transmission and distribution divisions. Going forward, there are plans to review the regulations on electricity retail rates (transitional measures) for the former EPCOs.

With the revision of electric power business types in the system reforms, as of April 2016, J-POWER has been reclassified from a wholesale electricity utility as prescribed in the Electricity Business Act prior to amendment to an electricity utility that conducts power generation and transmission businesses. Cost-basis rate regulations have been repealed, and rates related to the power generation business are now determined upon consultation with customers based on market competition. Rates related to the transmission business remain regulated, with a cost-basis rate system, to maintain a healthy transmission and distribution network system.

The majority of J-POWER's operating revenue comprises rate income from domestic sales to the former EPCOs. Accordingly, as market competition in the power generation business advances, we are taking steps to sustainably maximize the value of our power generation business. Specifically, we are working to stabilize our revenue platform by negotiating appropriate rates with customers, primarily the former EPCOs, and diversifying our electricity sales, as well as enhancing the maintenance of power plants to reinforce competitiveness.

Still, if there are major changes to business plans or operations due to shifts in long-term electricity demand, increased market competition, consultations with customers, or legislation, or if unforeseen problems with facilities cause an inability to secure adequate revenue to cover power generation costs, such a situation may adversely affect our financial position and business results.

### Ohma Nuclear Power Plant Construction Project

With regard to the Ohma Nuclear Power Plant Project, the Japan Atomic Energy Commission concluded in August 1995 that the plant has a policy-oriented role in enhancing the flexibility of the plan to use MOX (uranium-plutonium mixed oxide) fuel in light water reactors because the plant adopts an advanced boiling water reactor with a view to using MOX fuel for the entire core (full MOX-ABWR). In addition, the commission expected the implementation of the plan not only by J-POWER, which has primary responsibility, but also under the auspices of the government and EPCOs. Accordingly, under the government's guidelines, the Company is the recipient of an R&D grant for the use of MOX fuel for the entire reactor core. Furthermore, the Company has already concluded basic agreements with nine former EPCOs, excluding The Okinawa Electric Power Company, Incorporated, that require the nine former EPCOs to purchase the total amount of electricity generated at fair cost.

As a nuclear power plant using MOX fuel for the entire core, the Ohma Nuclear Power Plant Project received consent from the municipality of Ohma as well as Aomori Prefecture and was included by the Electric Power Development Coordination Council in the national Electric Power Development Master Plan as laid out by the Electric Power Development Promotion Act in August 1999. (The Electric Power Development Promotion Act was abolished in October 2003, and, with it, the system of the Electric Power Development Master Plan ended. The functions of the plan were taken on by the major power development site designation system, under which the project received site designation in February 2005.)

## Management's Discussion and Analysis

In April 2008, the nuclear reactor installation permit was granted based on the Act on Control of Nuclear Raw Material, Nuclear Fuel and Nuclear Reactors, and, in May of the same year, upon the initial approval of the construction work plan by the Minister of Economy, Trade and Industry, based on the Electricity Business Act, construction began. At that time, planned construction costs were ¥469.0 billion. Construction was suspended immediately after the Great East Japan Earthquake struck in March 2011 but was resumed in October 2012.

On December 16, 2014, we submitted an application for permission for alteration of a reactor installment license and an application for construction plan approval to the Nuclear Regulation Authority (NRA) in order to undergo a review of compliance with the New Safety Standards concerning nuclear power plants promulgated by the NRA in July 2013. Specific examples of the wide-ranging measures include the reinforcement of design-basis accident prevention measures and the raising of assumptions and enhancement of countermeasures with regard to earthquakes, tsunamis, and other such events to prevent severe accidents, as well as measures to prevent damage to the core and the containment vessel that were newly drawn up under the Safety Standards as severe accident countermeasures. Furthermore, we have decided to install a specified severe accident response facility that will enable reactor decompression and other functions to be controlled remotely to inhibit the abnormal release of radioactive material due to damage sustained by the reactor containment vessel. The construction work for the additional safety enhancement measures compiled in the above-mentioned application will commence following confirmation that the content of the Company's application conforms to the New Safety Standards when reviewed by the NRA. The Company forecasts that the additional construction work will cost approximately ¥130.0 billion. Moving forward, J-POWER will seriously and appropriately respond to the NRA's conformity reviews and steadily implement necessary safety measures or other measures required in a company-wide effort to build a safe power plant.

While it is impossible to predict the progress of the compliance review as an examinee, we aim to start construction on additional safety enhancement measures in the latter half of 2020 and to complete them in the latter half of 2025. However, the construction work schedule for the additional safety measures may be extended depending on changes in the environment surrounding the nuclear power business, the status of reviews by the NRA, or the emergence of a need for additional response to the New Safety Standards. In such events, construction expenses may increase further, and other related costs may arise. In addition, nuclear power generation entails various risks, such as revisions to plans due to significant changes in conditions around the nuclear power business caused by the review of Japan's nuclear policy, the advance of market competition, or other unexpected circumstances as well as risks associated with the storage and handling of radioactive materials and risks all electric power plants are exposed to, such as natural disasters and unforeseen accidents after operations have commenced.

In light of the importance of the Ohma Nuclear Power Plant in terms of supporting the nuclear fuel cycle through the peaceful use of plutonium and contributing to Japan's energy security, J-POWER intends to ensure that these risks are avoided or minimized. However, if any of these risks should eventuate, it could adversely affect the financial position and business results of the Company.

### New Businesses in and outside Japan, Including Overseas Power Generation Business

J-POWER aims to reinforce its revenue platform by advancing new initiatives domestically and overseas, including in the overseas power generation business.

Specifically, in the overseas power generation business, we are applying the experience gleaned through our consulting services businesses in various countries in the pursuit of independent power producer (IPP) projects and other initiatives.

In the domestic electric power business, we are proceeding with new development, including that of high-efficiency coal-fired thermal power plants; power generation businesses utilizing wind, geothermal, waste-fueled thermal, and other renewable energies; electric power retailing; and other new initiatives.

However, these businesses may not generate the level of profits that we anticipate, due to unforeseeable circumstances, including major changes in operating conditions; changes in demand or the market environment; and changes in regulations. Changes in our business plans or the suspension of operations or construction prompted by such circumstances could result in related expenses or a need for additional funding that could potentially have an adverse effect on our financial position and business results. Furthermore, some of these businesses are operated as joint ventures with third parties. In cases where the joint venture format is revised due to changes in the business environment or J-POWER is a minority equity owner and thus unable to engage in management and administration, the results of the joint venture may not beneficially impact our performance. In addition, overseas businesses entail foreign exchange risk as well as country risk due to political instability and other factors.

### Capital Procurement

The Company has invested a very large amount in power plants and other facilities. The funds for these investments have been procured mainly through borrowings and the issuance of bonds payable. We anticipate the need to raise funds in the future to invest in new domestic and overseas projects, such as Ohma Nuclear Power Plant and Takehara Thermal Power Plant New Unit No. 1, and to repay existing obligations. If we are unable to raise the required funds on acceptable terms and in a timely manner due to the prevailing conditions in the financial markets, the Company's credit situation, or other factors at that time, it could have an adverse effect on our business development, financial position, and business results.

### **Fuel for Coal-Fired Thermal Power**

J-POWER's coal-fired thermal power plants use imported coal as their main source of fuel. In procuring imported coal, the Company purchases coal from diverse sources in Australia, Indonesia, Russia, and elsewhere to seek both stable and economical supply. In addition, the Company holds interests in certain coal mines, aiming for stable coal supply. The Company's imported coal procurement is handled mainly under long-term or approximately one-year contracts, with spot purchasing to fill gaps as necessary. Coal purchase prices under long-term contracts are normally adjusted once per year in light of market prices.

The Company's fuel cost is impacted by such factors as changes in imported coal prices, supply and demand in the transport vessel market, and problems with the facilities or operations of suppliers. According to the power purchase agreements with customers for our major coal-fired thermal power plants, the electricity rates corresponding to fuel price properly reflect market conditions relating to fuel procurement. As a result, fluctuations in fuel cost have a limited impact on the business performance of J-POWER. However, if coal prices rise sharply, there will be a delay before the rise in fuel prices is reflected in electricity rates. This could have a temporary adverse effect on the results of our performance. Furthermore, if coal prices drop sharply, negatively affecting the performance of the coal mines in which J-POWER holds interests, the Company's financial position and business results could be adversely affected.

### **Natural Disasters, Infectious Disease Outbreaks, and Other Unforeseen Events**

Should a natural disaster, human error, terrorist activity, fuel supply stoppage, or other unforeseen circumstance result in a major disruption of one of J-POWER's power plants or transmission or transformation facilities, or should such an event disrupt the information systems that control operations at these facilities, this could potentially hamper our business operations and consequently have an adverse effect on the surrounding environment. To prevent accidents at power plants as well as transmission and transformation facilities, which are important infrastructure for the countries and regions where J-POWER operates, to ensure the safety of involved parties and to protect the surrounding environment, J-POWER works to establish security and disaster prevention systems, takes accident and disaster prevention measures and emergency response and recovery countermeasures, and implements environmental monitoring.

Nevertheless, if an accident or other event were to halt operations of J-POWER's power plant, transmission, or transformation facilities, or if an accident or other event were to negatively impact the surrounding environment, the Company's financial position and business results could be adversely affected.

Furthermore, J-POWER implements measures related to the maintenance and operation of its power plant, transmission, and transformation facilities to ensure stable power supply. Nevertheless, if an outbreak of an infectious disease or other unforeseen event were to result in difficulties in securing the personnel, materials or equipment necessary to carry out facility operations, construction, repairs, large-scale inspections or other operations, the Company's financial position and business results could be adversely affected.

### **Legal Regulations**

The electric power business, which comprises the majority of J-POWER's business, is regulated by the Electricity Business Act.

In line with the Amended Electricity Business Act of June 2014, regulations related to wholesale electricity utilities (regulations on business permits and rates) stipulated in the previous act were repealed in April 2016. However, J-POWER will continue to be regulated under the act as an electricity utility that operates power generation and transmission businesses. Thus, J-POWER is subject to business and safety regulations, change and suspension orders derived from such regulations, and provisions regarding the cancellation of licenses to operate transmission businesses. The Company's business operations are also subject to various other laws and regulations. If the Company is unable to comply with these laws and regulations, or if these laws and regulations are revised, this could potentially have an adverse effect on its business operations, financial position, and business results.

Also, based on the concept of mutual aid for nuclear power operators, nuclear power business operators are obligated to contribute to expenses required for the Nuclear Damage Compensation and Decommissioning Facilitation Corporation, based on the Nuclear Damage Compensation and Decommissioning Facilitation Corporation Act, which aims to build a system that centers on a facilitation organization that can respond to nuclear damage compensation into the future. In relation to the Ohma Nuclear Power Plant Project, which is currently under way, J-POWER will pay contributions once the Ohma Nuclear Power Plant commences operation of the nuclear reactor, as stipulated in the Act on Compensation for Nuclear Damage. Depending on the amount of such contributions, this may adversely affect the financial position and business results of the Company.

### **Management of Business Information**

J-POWER holds a large amount of important information that must be kept confidential, including personal information. J-POWER controls this information carefully by implementing information security measures, employee training programs, and other means. However, a leak of sensitive information outside the Company could adversely affect J-POWER's reputation and business performance.

# 10-Year Consolidated Financial Data

## Consolidated Balance Sheet

	2011/3	2012/3	2013/3
<b>Assets</b>			
<b>Noncurrent Assets</b>	<b>1,842,658</b>	<b>1,849,786</b>	<b>1,975,202</b>
<b>Electric Utility Plant and Equipment</b>	<b>1,178,492</b>	<b>1,111,251</b>	<b>1,058,849</b>
Hydroelectric Power Production Facilities	389,892	374,510	363,437
Thermal Power Production Facilities	454,823	423,049	387,957
Internal Combustion Engine Power Production Facilities	4,694	4,296	3,956
Renewable Power Production Facilities	38,436	34,479	31,358
Transmission Facilities	197,163	186,274	185,754
Transformation Facilities	34,456	31,774	30,608
Communication Facilities	9,539	9,065	8,638
General Facilities	49,486	47,801	47,137
<b>Overseas Business Facilities</b>	<b>—</b>	<b>—</b>	<b>14,311</b>
<b>Other Noncurrent Assets</b>	<b>64,920</b>	<b>65,657</b>	<b>104,529</b>
<b>Construction in Progress</b>	<b>301,676</b>	<b>380,425</b>	<b>464,674</b>
Construction and Retirement in Progress	301,676	380,425	464,674
<b>Nuclear Fuel</b>	<b>46,693</b>	<b>54,157</b>	<b>59,769</b>
Nuclear Fuel in Processing	46,693	54,157	59,769
<b>Investments and Other Assets</b>	<b>250,875</b>	<b>238,295</b>	<b>273,067</b>
Long-Term Investments	181,934	181,132	202,464
Net Defined Benefit Asset	—	—	—
Deferred Tax Assets	56,843	52,571	47,234
Other	13,292	5,653	24,416
Allowance for Doubtful Accounts	(1,196)	(1,062)	(1,047)
<b>Current Assets</b>	<b>169,727</b>	<b>166,607</b>	<b>194,707</b>
Cash and Deposits	37,202	35,112	49,283
Notes and Accounts Receivable—Trade	57,781	59,283	61,644
Short-Term Investments	2,346	1,331	402
Inventories	32,400	34,972	38,160
Deferred Tax Assets	5,998	6,688	7,423
Other	34,006	29,284	37,847
Allowance for Doubtful Accounts	(9)	(63)	(54)
<b>Total Assets</b>	<b>2,012,386</b>	<b>2,016,394</b>	<b>2,169,909</b>

- Notes: 1. Until the year ended March 31, 2012, "Overseas Business Facilities" was included in "Other Noncurrent Assets," but it has been presented separately from the year ended March 31, 2014 due to the increase in monetary importance due to progress in the Thai projects. For year-on-year comparison purposes, it is also presented separately in the year ended March 31, 2013.
2. Accounting policies were partially changed from the year ended March 31, 2017 and the figures for the year ended March 31, 2016 reflect retroactive application of the change.
3. Partial amendments to "Accounting Standard for Tax Effect Accounting," were applied from the year ended March 31, 2019. For year-on-year comparison purposes, figures for the year ended March 31, 2018 have been restated according to the amended standard.

(Millions of yen)

2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3
<b>2,149,579</b>	<b>2,275,453</b>	<b>2,232,286</b>	<b>2,271,046</b>	<b>2,325,256</b>	<b>2,401,671</b>	<b>2,471,347</b>
<b>1,023,751</b>	<b>986,552</b>	<b>948,252</b>	<b>958,754</b>	<b>951,149</b>	<b>944,323</b>	<b>965,082</b>
355,616	348,911	343,193	346,037	346,719	351,141	353,720
362,307	334,252	313,744	313,198	305,191	302,274	296,715
5,414	5,105	3,754	3,301	3,029	2,967	2,377
36,698	40,877	35,960	46,170	50,784	44,169	72,492
176,102	168,680	161,491	157,790	153,180	150,699	147,922
30,482	30,206	29,884	29,598	29,718	29,833	28,896
8,596	8,469	8,449	8,186	8,375	8,552	8,597
48,532	50,049	51,772	54,470	54,148	54,684	54,359
<b>125,018</b>	<b>264,800</b>	<b>357,448</b>	<b>332,010</b>	<b>341,418</b>	<b>312,128</b>	<b>316,333</b>
<b>109,787</b>	<b>115,111</b>	<b>101,827</b>	<b>92,501</b>	<b>93,404</b>	<b>94,836</b>	<b>90,924</b>
<b>512,604</b>	<b>506,967</b>	<b>441,080</b>	<b>476,171</b>	<b>525,740</b>	<b>582,083</b>	<b>647,160</b>
512,604	506,967	441,080	476,171	525,740	582,083	647,160
<b>69,216</b>	<b>71,467</b>	<b>73,447</b>	<b>73,682</b>	<b>73,800</b>	<b>74,514</b>	<b>74,812</b>
69,216	71,467	73,447	73,682	73,800	74,514	74,812
<b>309,201</b>	<b>330,555</b>	<b>310,231</b>	<b>337,926</b>	<b>339,743</b>	<b>393,785</b>	<b>377,033</b>
244,181	269,891	234,506	253,660	256,715	313,339	288,706
—	278	—	2	—	—	—
40,734	38,705	43,818	40,514	47,744	53,321	59,413
24,331	21,725	31,950	43,794	35,283	27,123	28,994
(45)	(45)	(45)	(45)	—	—	(81)
<b>235,636</b>	<b>383,695</b>	<b>308,436</b>	<b>335,239</b>	<b>321,798</b>	<b>364,508</b>	<b>334,043</b>
50,333	69,151	87,659	117,240	129,675	121,187	159,325
70,135	71,288	66,312	78,805	91,432	84,686	80,466
35,000	167,433	72,410	51,344	9,045	66,000	—
34,053	37,781	41,199	47,172	52,368	53,483	50,375
8,637	5,736	5,268	4,564	—	—	—
37,477	32,337	35,601	36,129	39,322	39,149	43,876
(0)	(32)	(14)	(18)	(46)	—	(0)
<b>2,385,216</b>	<b>2,659,149</b>	<b>2,540,723</b>	<b>2,606,285</b>	<b>2,647,054</b>	<b>2,766,179</b>	<b>2,805,390</b>



## 10-Year Consolidated Financial Data

	2011/3	2012/3	2013/3
<b>Liabilities</b>			
<b>Noncurrent Liabilities</b>	<b>1,319,146</b>	<b>1,324,663</b>	<b>1,402,287</b>
Bonds Payable	734,898	714,914	694,930
Long-Term Loans Payable	500,913	522,407	608,977
Lease Obligations	1,093	983	982
Provision for Retirement Benefits	57,069	58,015	59,012
Other Provision	16	25	36
Net Defined Benefit Liability	—	—	—
Asset Retirement Obligations	3,620	4,585	3,971
Deferred Tax Liabilities	5,869	6,390	7,801
Other	15,666	17,339	26,574
<b>Current Liabilities</b>	<b>277,563</b>	<b>284,761</b>	<b>313,311</b>
Current Portion of Noncurrent Liabilities	162,958	166,342	196,999
Short-Term Loans Payable	17,528	18,443	18,475
Commercial Paper	11,999	12,999	3,999
Notes and Accounts Payable—Trade	20,112	20,011	25,049
Accrued Taxes	21,322	11,408	10,811
Other Provision	317	325	273
Asset Retirement Obligations	473	626	1,495
Deferred Tax Liabilities	11	4	3
Other	42,839	54,599	56,202
<b>Reserves under Special Laws</b>	<b>777</b>	<b>777</b>	<b>425</b>
Reserve for Fluctuation in Water Levels	777	777	425
<b>Total Liabilities</b>	<b>1,597,487</b>	<b>1,610,202</b>	<b>1,716,024</b>
<b>Net Assets</b>			
<b>Shareholders' Equity</b>	<b>435,760</b>	<b>441,369</b>	<b>460,673</b>
Capital Stock	152,449	152,449	152,449
Capital Surplus	81,849	81,849	81,849
Retained Earnings	264,724	270,334	289,639
Treasury Shares	(63,263)	(63,264)	(63,265)
<b>Accumulated Other Comprehensive Income</b>	<b>(19,997)</b>	<b>(33,985)</b>	<b>(6,768)</b>
Valuation Difference on Available-for-Sale Securities	(137)	(772)	4,855
Deferred Gains or Losses on Hedges	611	(4,209)	(6,929)
Foreign Currency Translation Adjustment	(20,471)	(29,003)	(4,693)
Remeasurements of Defined Benefit Plans	—	—	—
<b>Non-Controlling Interests</b>	<b>(863)</b>	<b>(1,191)</b>	<b>(19)</b>
<b>Total Net Assets</b>	<b>414,898</b>	<b>406,192</b>	<b>453,885</b>
<b>Total Liabilities and Net Assets</b>	<b>2,012,386</b>	<b>2,016,394</b>	<b>2,169,909</b>

Notes: 1. The "Accounting Standards for Retirement Benefits" (Corporate Accounting Standard No. 26 of May 17, 2012) and the "Guidelines for Applying Accounting Standards for Retirement Benefits" (Corporate Accounting Standard Application Guideline No. 25 of May 17, 2012) are applied from the end of the consolidated fiscal year ended March 31, 2014.

2. Accounting policies were partially changed from the year ended March 31, 2017 and the figures for the year ended March 31, 2016 reflect retroactive application of the change.

3. Partial amendments to "Accounting Standard for Tax Effect Accounting," were applied from the year ended March 31, 2019. For year-on-year comparison purposes, figures for the year ended March 31, 2018 have been restated according to the amended standard.

(Millions of yen)

2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3
<b>1,522,905</b>	<b>1,633,825</b>	<b>1,561,072</b>	<b>1,497,888</b>	<b>1,561,828</b>	<b>1,622,378</b>	<b>1,642,354</b>
691,346	666,061	575,079	494,991	554,991	614,992	604,993
741,509	857,846	867,276	891,200	875,043	852,269	865,369
981	697	479	353	368	1,106	2,218
—	—	—	—	—	—	—
43	84	89	120	152	30	29
49,071	48,901	65,912	58,079	55,176	57,790	60,119
6,644	7,510	11,685	11,971	28,484	29,023	30,877
14,730	20,394	18,294	23,387	22,343	19,455	16,715
18,579	32,327	22,254	17,783	25,266	47,709	62,031
<b>342,714</b>	<b>329,025</b>	<b>304,100</b>	<b>344,377</b>	<b>249,100</b>	<b>298,219</b>	<b>305,648</b>
207,968	169,754	158,131	208,760	114,307	159,335	161,013
20,318	30,044	28,009	24,957	16,803	15,278	14,952
—	—	—	—	—	—	—
33,197	44,035	37,033	24,616	25,539	25,457	28,729
8,791	13,516	23,344	19,843	26,303	17,155	19,430
302	270	265	267	292	678	622
245	372	635	592	341	368	386
9	5	22	5	—	—	—
71,880	71,027	56,656	65,333	65,512	79,946	80,514
<b>119</b>	<b>—</b>	<b>116</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
119	—	116	—	—	—	—
<b>1,865,739</b>	<b>1,962,851</b>	<b>1,865,289</b>	<b>1,842,266</b>	<b>1,810,929</b>	<b>1,920,597</b>	<b>1,948,003</b>
<b>478,860</b>	<b>629,463</b>	<b>650,817</b>	<b>689,542</b>	<b>745,176</b>	<b>777,699</b>	<b>806,197</b>
152,449	180,502	180,502	180,502	180,502	180,502	180,502
81,849	109,902	109,902	119,927	119,927	119,927	119,877
307,829	339,061	360,418	389,117	444,753	477,276	505,825
(63,268)	(2)	(4)	(5)	(6)	(7)	(8)
<b>37,350</b>	<b>59,268</b>	<b>15,775</b>	<b>34,276</b>	<b>42,114</b>	<b>19,760</b>	<b>1,567</b>
9,030	19,860	12,516	15,594	16,822	12,482	6,156
1,772	(15,821)	(14,395)	(2,183)	(6,580)	(7,293)	(23,263)
22,955	53,205	30,464	21,295	30,960	17,551	22,479
3,592	2,023	(12,809)	(430)	912	(2,979)	(3,806)
<b>3,265</b>	<b>7,566</b>	<b>8,839</b>	<b>40,200</b>	<b>48,833</b>	<b>48,123</b>	<b>49,623</b>
<b>519,477</b>	<b>696,298</b>	<b>675,433</b>	<b>764,019</b>	<b>836,124</b>	<b>845,582</b>	<b>857,387</b>
<b>2,385,216</b>	<b>2,659,149</b>	<b>2,540,723</b>	<b>2,606,285</b>	<b>2,647,054</b>	<b>2,766,179</b>	<b>2,805,390</b>

## 10-Year Consolidated Financial Data

### Consolidated Statement of Income

	2011/3	2012/3	2013/3
<b>Operating Revenue</b>	<b>635,975</b>	<b>654,600</b>	<b>656,056</b>
Electric Utility Operating Revenue	584,436	609,775	605,338
Overseas Business Operating Revenue	1,881	2,005	1,647
Other Business Operating Revenue	49,657	42,819	49,070
<b>Operating Expenses</b>	<b>565,387</b>	<b>604,800</b>	<b>601,490</b>
Electric Utility Operating Expenses	509,116	553,873	540,134
Overseas Business Operating Expenses	—	—	8,346
Other Business Operating Expenses	56,271	50,927	53,009
<b>Operating Income</b>	<b>70,588</b>	<b>49,800</b>	<b>54,566</b>
<b>Non-Operating Income</b>	<b>14,965</b>	<b>15,356</b>	<b>17,577</b>
Dividends Income	1,499	1,315	1,321
Interest Income	1,220	968	1,195
Share of Profit of Entities Accounted for Using Equity Method	9,072	9,565	11,728
Foreign Exchange Gains	—	—	—
Other	3,172	3,506	3,331
<b>Non-Operating Expenses</b>	<b>29,231</b>	<b>28,536</b>	<b>27,318</b>
Interest Expenses	22,371	22,005	22,362
Foreign Exchange Losses	—	—	991
Other	6,860	6,530	3,964
<b>Total Ordinary Revenue</b>	<b>650,941</b>	<b>669,957</b>	<b>673,634</b>
<b>Total Ordinary Expenses</b>	<b>594,619</b>	<b>633,337</b>	<b>628,808</b>
<b>Ordinary Income</b>	<b>56,322</b>	<b>36,619</b>	<b>44,825</b>
<b>Provision or Reversal of Reserve for Fluctuation in Water Levels</b>	<b>42</b>	<b>—</b>	<b>(351)</b>
Provision of Reserve for Fluctuation in Water Levels	42	—	—
Reversal of Reserve for Fluctuation in Water Levels	—	—	(351)
<b>Extraordinary Income</b>	<b>1,635</b>	<b>—</b>	<b>—</b>
<b>Extraordinary Losses</b>	<b>19,176</b>	<b>3,382</b>	<b>—</b>
<b>Profit before Income Taxes</b>	<b>38,739</b>	<b>33,237</b>	<b>45,176</b>
<b>Income Taxes—Current</b>	<b>20,403</b>	<b>12,953</b>	<b>11,940</b>
<b>Income Taxes—Deferred</b>	<b>2,459</b>	<b>4,370</b>	<b>3,622</b>
<b>Total Income Taxes</b>	<b>22,863</b>	<b>17,324</b>	<b>15,562</b>
<b>Profit</b>	<b>15,876</b>	<b>15,913</b>	<b>29,613</b>
<b>Profit Attributable to Non-Controlling Interests</b>	<b>(3,707)</b>	<b>(200)</b>	<b>(194)</b>
<b>Profit Attributable to Owners of Parent</b>	<b>19,583</b>	<b>16,113</b>	<b>29,808</b>

Notes: 1. Until the year ended March 31, 2012, "Overseas Business Operating Revenue" was included in "Other Business Operating Revenue," but it has been presented separately from the year ended March 31, 2014 due to the increase in monetary importance due to progress in the Thai projects. For year-on-year comparison purposes, it is also presented separately in the year ended March 31, 2013.

2. Until the year ended March 31, 2012, "Overseas Business Operating Expenses" was included in "Electric Utility Operating Expenses" and "Other Business Operating Expenses," but it has been presented separately from the year ended March 31, 2014 due to the increase in monetary importance due to progress in the Thai projects. For year-on-year comparison purposes, it is also presented separately in the year ended March 31, 2013.

Under each item, there are cases of fiscal years in which the monetary importance has been minor being included and represented under another item.

3. Accounting policies were partially changed from the year ended March 31, 2017 and the figures for the year ended March 31, 2016 reflect retroactive application of the change.

4. Under each item, there are cases of fiscal years in which the monetary importance has been minor being included and represented under another item.

(Millions of yen)

2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3
<b>706,835</b>	<b>750,627</b>	<b>780,072</b>	<b>744,402</b>	<b>856,252</b>	<b>897,366</b>	<b>913,775</b>
609,080	588,184	570,837	538,558	631,923	693,790	684,155
42,834	108,916	155,952	149,888	163,084	141,024	179,094
54,920	53,526	53,282	55,955	61,244	62,551	50,525
<b>647,663</b>	<b>677,767</b>	<b>692,157</b>	<b>662,675</b>	<b>751,916</b>	<b>818,521</b>	<b>830,136</b>
545,430	521,351	506,234	487,766	566,143	652,781	629,287
43,899	98,979	131,605	119,535	131,251	112,003	151,810
58,333	57,436	54,317	55,374	54,521	53,737	49,039
<b>59,171</b>	<b>72,859</b>	<b>87,915</b>	<b>81,726</b>	<b>104,336</b>	<b>78,844</b>	<b>83,638</b>
<b>22,357</b>	<b>22,714</b>	<b>17,871</b>	<b>20,526</b>	<b>29,113</b>	<b>18,894</b>	<b>26,537</b>
1,454	1,869	2,409	1,689	1,577	1,592	1,465
1,054	1,155	905	1,024	1,287	1,357	1,264
16,380	15,659	10,889	13,258	9,721	9,657	11,320
—	—	—	1,770	11,179	742	7,498
3,468	4,030	3,667	2,783	5,347	5,545	4,989
<b>41,451</b>	<b>36,223</b>	<b>47,248</b>	<b>35,103</b>	<b>30,974</b>	<b>29,200</b>	<b>32,091</b>
25,305	28,224	30,495	29,798	28,387	26,377	26,293
11,190	1,547	12,888	—	—	—	—
4,955	6,451	3,865	5,304	2,586	2,822	5,797
<b>729,192</b>	<b>773,341</b>	<b>797,944</b>	<b>764,929</b>	<b>885,366</b>	<b>916,261</b>	<b>940,313</b>
<b>689,115</b>	<b>713,991</b>	<b>739,405</b>	<b>697,779</b>	<b>782,890</b>	<b>847,722</b>	<b>862,228</b>
<b>40,077</b>	<b>59,350</b>	<b>58,538</b>	<b>67,150</b>	<b>102,476</b>	<b>68,539</b>	<b>78,085</b>
<b>(306)</b>	<b>(119)</b>	<b>116</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
—	—	116	—	—	—	—
(306)	(119)	—	—	—	—	—
<b>2,386</b>	<b>2,127</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
—	—	—	—	3,389	—	12,497
<b>42,770</b>	<b>61,598</b>	<b>58,241</b>	<b>67,150</b>	<b>99,086</b>	<b>68,539</b>	<b>65,587</b>
<b>8,372</b>	<b>7,468</b>	<b>12,821</b>	<b>18,634</b>	<b>20,124</b>	<b>17,149</b>	<b>15,611</b>
<b>6,579</b>	<b>9,917</b>	<b>5,059</b>	<b>2,847</b>	<b>(3,700)</b>	<b>(3,947)</b>	<b>(3,620)</b>
<b>14,952</b>	<b>17,386</b>	<b>17,880</b>	<b>21,482</b>	<b>16,423</b>	<b>13,201</b>	<b>11,990</b>
<b>27,817</b>	<b>44,212</b>	<b>40,540</b>	<b>45,667</b>	<b>82,662</b>	<b>55,337</b>	<b>53,596</b>
<b>(876)</b>	<b>1,005</b>	<b>459</b>	<b>4,238</b>	<b>14,213</b>	<b>9,084</b>	<b>11,319</b>
<b>28,694</b>	<b>43,206</b>	<b>40,081</b>	<b>41,429</b>	<b>68,448</b>	<b>46,252</b>	<b>42,277</b>

## 10-Year Consolidated Financial Data

### Consolidated Statement of Cash Flows

	2011/3	2012/3	2013/3
<b>Cash Flows from Operating Activities</b>			
Profit before Income Taxes	38,739	33,237	45,176
Depreciation and Amortization	111,644	105,271	95,254
Impairment Loss	9,266	946	—
Loss on Liquidation of Business	4,550	—	—
Loss on Retirement of Noncurrent Assets	2,941	2,434	2,418
Loss on Business of Subsidiaries and Associates	—	—	—
Disaster Recovery Expenses	—	3,382	—
Increase (Decrease) in Provision for Retirement Benefits	(779)	971	987
Increase (Decrease) in Net Defined Benefit Liability	—	—	—
Increase (Decrease) in Reserve for Fluctuation in Water Levels	42	—	(351)
Interest and Dividend Income	(2,720)	(2,284)	(2,517)
Interest Expenses	22,371	22,005	22,362
Decrease (Increase) in Notes and Accounts Receivable—Trade	(10,753)	(1,607)	(2,133)
Decrease (Increase) in Inventories	(6,132)	(2,488)	(3,133)
Increase (Decrease) in Notes and Accounts Payable—Trade	3,171	3,148	5,642
Loss (Gain) on Sales of Securities	(1,450)	(484)	(620)
Loss (Gain) on Valuation of Securities	5,359	1,791	242
Share of (Profit) Loss of Entities Accounted for Using Equity Method	(9,072)	(9,565)	(11,728)
Loss (Gain) on Sales of Shares of Subsidiaries	—	—	—
Loss (Gain) on Sale of Noncurrent Assets	432	747	526
Other, Net	8,355	8,526	(8,742)
Subtotal	175,965	166,031	143,385
Interest and Dividend Income Received	7,644	6,869	7,926
Interest Expenses Paid	(22,881)	(21,765)	(21,974)
Income Taxes Paid	(9,492)	(25,244)	(9,552)
<b>Net Cash Provided by (Used in) Operating Activities</b>	<b>151,236</b>	<b>125,891</b>	<b>119,786</b>
<b>Cash Flows from Investing Activities</b>			
Proceeds from Contribution Received for Construction	7,068	3,102	6,343
Purchase of Noncurrent Assets	(115,827)	(133,711)	(165,201)
Proceeds from Sales of Noncurrent Assets	2,453	2,285	—
Payments of Investments and Loans Receivable	(14,184)	(6,068)	(1,347)
Collections of Investments and Receivable	5,235	4,915	7,938
Proceeds from Sales of Shares of Subsidiaries Resulting in Change in Scope of Consolidation	—	1,425	—
Other, Net	(9,419)	(8,802)	(18,101)
<b>Net Cash Provided by (Used in) Investing Activities</b>	<b>(124,675)</b>	<b>(136,852)</b>	<b>(170,369)</b>
<b>Cash Flows from Financing Activities</b>			
Proceeds from Issuance of Bonds	79,726	—	39,877
Redemption of Bonds	(88,000)	(35,000)	(20,000)
Proceeds from Long-Term Loans Payable	49,036	176,745	207,887
Repayment of Long-Term Loans Payable	(53,988)	(127,173)	(146,048)
Increase in Short-Term Loans Payable	84,880	103,760	108,500
Decrease in Short-Term Loans Payable	(80,680)	(103,070)	(110,038)
Proceeds from Issuance of Commercial Papers	392,965	359,968	326,969
Redemption of Commercial Papers	(406,000)	(359,000)	(336,000)
Proceeds from Issuance of Common Shares	—	—	—
Proceeds from Sales of Treasury Shares	—	—	—
Proceeds from Sales of Subsidiaries' Shares that Do Not Result in Changes in Scope of Consolidation	—	—	—
Cash Dividends Paid	(10,503)	(10,502)	(10,501)
Dividends Paid to Non-controlling Interests	(8)	(196)	—
Other, Net	3,398	3,764	856
<b>Net Cash Provided by (Used in) Financing Activities</b>	<b>(29,172)</b>	<b>9,296</b>	<b>61,502</b>
<b>Effect of Exchange Rate Change on Cash and Cash Equivalents</b>	<b>285</b>	<b>(585)</b>	<b>2,615</b>
<b>Net Increase (Decrease) in Cash and Cash Equivalents</b>	<b>(2,326)</b>	<b>(2,248)</b>	<b>13,535</b>
<b>Cash and Cash Equivalents at Beginning of the Period</b>	<b>40,329</b>	<b>38,002</b>	<b>35,359</b>
<b>Increase (Decrease) in Cash from the Addition of Consolidated Subsidiaries</b>	<b>—</b>	<b>(394)</b>	<b>—</b>
<b>Cash and Cash Equivalents at the End of the Period</b>	<b>38,002</b>	<b>35,359</b>	<b>48,894</b>

Notes: 1. Accounting policies were partially changed from the year ended March 31, 2017 and the figures for the year ended March 31, 2016 reflect retroactive application of the change.

2. Under each item, there are cases of fiscal years in which the monetary importance has been minor being included and represented under another item.



(Millions of yen)

2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3
42,770	61,598	58,421	67,150	99,086	68,539	65,587
91,408	93,309	94,582	75,660	82,298	79,979	83,009
14	2,489	1,392	2,624	3,389	632	3,586
—	—	—	—	—	—	—
2,241	2,359	3,656	2,842	3,039	4,786	3,963
—	—	—	—	—	—	8,911
—	—	—	—	—	—	—
—	—	—	—	—	—	—
(4,800)	(4,611)	(3,351)	9,276	(1,046)	(2,777)	1,161
(306)	(119)	116	—	—	—	—
(2,508)	(3,024)	(3,314)	(2,713)	(2,864)	(2,950)	(2,729)
25,305	28,224	30,495	29,798	28,387	26,377	26,293
(7,753)	23	2,445	(13,433)	(10,801)	6,211	5,818
4,223	(3,593)	(3,259)	(5,503)	(5,121)	(1,315)	3,926
9,244	6,639	(3,085)	(6,477)	(2,143)	3,394	322
(280)	(252)	—	—	—	—	—
—	—	—	—	—	—	—
(16,380)	(15,659)	(10,889)	(13,258)	(9,721)	(9,657)	(11,320)
—	(2,127)	—	—	—	—	—
—	—	—	—	—	—	—
2,123	6,841	3,134	6,786	6,863	9,378	(2,064)
145,302	172,097	170,342	152,753	191,366	182,599	186,466
12,626	10,735	13,573	13,229	16,620	15,749	16,036
(25,131)	(28,211)	(30,554)	(30,224)	(28,486)	(26,102)	(25,724)
(10,687)	(6,807)	(7,232)	(20,317)	(19,190)	(23,822)	(17,531)
<b>122,110</b>	<b>147,813</b>	<b>146,130</b>	<b>115,440</b>	<b>160,310</b>	<b>148,423</b>	<b>159,245</b>
—	—	—	—	—	—	—
(176,982)	(148,404)	(140,840)	(108,149)	(98,816)	(106,009)	(149,520)
—	—	—	—	—	—	—
(1,149)	(4,429)	(2,537)	(18,005)	(8,149)	(74,457)	(10,912)
6,460	4,053	15,960	2,577	2,243	10,410	7,055
—	1,665	—	—	—	—	—
(5,704)	4,150	(4,123)	(14,086)	(4,913)	(375)	(8,333)
<b>(177,375)</b>	<b>(142,964)</b>	<b>(131,541)</b>	<b>(137,663)</b>	<b>(109,635)</b>	<b>(170,432)</b>	<b>(161,711)</b>
79,740	39,858	—	79,702	99,633	119,548	69,698
(63,599)	(85,298)	(60,999)	(90,000)	(160,100)	(40,000)	(60,000)
241,625	189,320	96,697	83,762	56,510	79,720	87,624
(158,518)	(120,062)	(110,783)	(69,108)	(53,280)	(74,860)	(101,962)
97,221	104,942	100,944	87,663	67,708	63,470	62,565
(95,374)	(95,582)	(102,994)	(90,194)	(75,813)	(64,991)	(62,896)
83,996	—	2,999	15,000	15,000	83,000	—
(88,000)	—	(3,000)	(15,000)	(15,000)	(83,000)	—
—	59,359	—	—	—	—	—
—	59,740	—	—	—	—	—
—	—	—	42,363	—	—	—
(10,504)	(10,505)	(12,811)	(12,811)	(12,810)	(13,729)	(13,727)
—	—	—	—	(7,342)	(10,826)	(8,217)
1,709	2,148	1,315	(916)	(329)	16,289	(821)
<b>88,295</b>	<b>143,920</b>	<b>(88,632)</b>	<b>30,461</b>	<b>(85,825)</b>	<b>74,622</b>	<b>(27,737)</b>
<b>3,297</b>	<b>2,446</b>	<b>(2,446)</b>	<b>267</b>	<b>3,536</b>	<b>(2,375)</b>	<b>337</b>
<b>36,328</b>	<b>151,216</b>	<b>(76,490)</b>	<b>8,505</b>	<b>(31,614)</b>	<b>50,237</b>	<b>(29,865)</b>
<b>48,894</b>	<b>85,223</b>	<b>236,439</b>	<b>159,949</b>	<b>168,454</b>	<b>136,840</b>	<b>187,077</b>
—	—	—	—	—	—	—
<b>85,223</b>	<b>236,439</b>	<b>159,949</b>	<b>168,454</b>	<b>136,840</b>	<b>187,077</b>	<b>157,212</b>

## 10-Year Consolidated Financial Data

### Segment Information

	2011/3	2012/3	2013/3
<b>Sales to External Customers</b>			
Electric Power Business	584,436	609,775	605,338
Electric Power-Related Business	26,294	23,133	26,599
Overseas Business	1,881	2,005	1,647
Other Businesses	23,363	19,686	22,471
Consolidated	635,975	654,600	656,056
<b>Ordinary Income</b>			
Electric Power Business	41,832	22,290	31,088
Electric Power-Related Business	10,425	8,373	9,099
Overseas Business	5,047	3,499	3,907
Other Business	(1,517)	(3)	986
Adjustments	533	2,460	(256)
Consolidated	56,322	36,619	44,825
<b>Depreciation and Amortization</b>			
Electric Power Business	110,179	104,344	93,163
Electric Power-Related Business	3,362	3,514	4,498
Overseas Business	115	55	84
Other Business	1,231	521	492
Adjustments	(3,244)	(3,164)	(2,984)
Consolidated	111,644	105,271	95,254
<b>Increase in the Tangible and Intangible Noncurrent Assets</b>			
Electric Power Business	70,742	68,286	69,390
Electric Power-Related Business	5,236	7,119	46,713
Overseas Business	18,091	62,548	60,175
Other Business	643	340	494
Adjustments	(1,584)	(570)	(1,667)
Consolidated	93,128	137,725	175,106

Note: Accounting policies were partially changed from the year ended March 31, 2017 and the figures for the year ended March 31, 2016 reflect retroactive application of the change.

(Millions of yen)

2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3
609,080	588,184	570,837	538,558	631,923	693,790	684,155
29,944	30,467	31,973	34,004	36,934	35,518	31,988
42,834	108,916	155,952	149,888	163,084	141,024	179,094
24,975	23,059	21,309	21,950	24,309	27,032	18,537
706,835	750,627	780,072	744,402	856,252	897,366	913,775
29,088	33,386	32,239	22,212	39,561	14,995	27,466
9,626	8,970	14,462	14,244	23,098	26,468	18,507
52	15,990	11,483	31,229	40,528	29,284	33,965
956	611	810	1,376	1,258	1,388	569
353	392	(456)	(1,912)	(1,970)	(3,597)	(2,423)
40,077	59,350	58,538	67,150	102,476	68,539	78,085
85,173	81,924	77,628	54,650	60,606	58,413	59,111
5,308	5,776	6,252	5,975	5,786	5,579	6,754
3,299	7,820	12,833	16,448	17,443	17,527	18,723
512	468	422	314	282	303	333
(2,884)	(2,680)	(2,553)	(1,728)	(1,819)	(1,845)	(1,913)
91,408	93,309	94,582	75,660	82,298	79,979	83,009
94,307	67,038	119,176	107,841	100,129	99,924	116,971
4,889	7,071	2,820	2,153	3,639	4,850	16,581
95,815	75,158	11,472	1,358	5,018	4,711	27,232
546	317	301	553	346	700	420
(532)	(2,692)	(7,450)	(6,070)	(10,417)	(2,406)	1,490
195,026	146,894	126,320	105,837	98,716	107,780	162,696

# Major Group Companies

(As of March 31, 2020)

	Company Name	Main Businesses	Equity Stake (%)
Consolidated Subsidiaries	<b>Electric Power Business</b>		
	J-POWER SUPPLY & TRADING Co., Ltd.	Power supply business	100.0
	Mihama Seaside Power Co., Ltd.	Thermal power business	100.0
	ITOIGAWA POWER Inc.	Thermal power business	64.0
	J-Wind Co., Ltd.	Wind power business	100.0
	J-Wind NIKAHO Co., Ltd.	Wind power business	100.0
	J-Wind KUZUMAKI Co., Ltd.	Wind power business	100.0
	J-Wind SETANA Co., Ltd.	Wind power business	100.0
	J-Wind Kaminokuni, Ltd.	Wind power business	100.0
	Nagasaki-Shikamachi Wind Power Co., Ltd.	Wind power business	70.0
	Electric Power Development Electricity Transmission Business Division Co., Ltd.	Transmission business	100.0
	and 1 other company		
	<b>Electric Power-Related Business</b>		
	JPec Co., Ltd.	Construction, technical development, design, consulting, maintenance, and research for thermal and nuclear power plants; unloading and transporting of coal at thermal power plants; sale of fly ash; shipping of coal for thermal power plants; research and planning of environmental conservation	100.0
	JPHYTEC Co., Ltd.	Construction, technical development, design, consulting, maintenance, and research for hydroelectric power plants, substations, and transmission lines; surveying of and compensation for construction sites; civil engineering, construction management, and construction services	100.0
	J-POWER Business Service Corporation	Operation of welfare facilities; facility maintenance; business process outsourcing; development of computer software	100.0
	KEC Corporation	Construction and maintenance of electronic and communications facilities	100.0
	JP Design Co., Ltd.	Design, management, and research for electric power facilities and other facilities and construction consulting	100.0
	J-POWER RESOURCES Co., Ltd.	Import, sales, and transportation of coal	100.0
	J-POWER AUSTRALIA PTY. LTD.	Investment in coal mines in Australia	100.0
	J-Wind Service Co., Ltd.	Maintenance and operation of wind power plants	100.0
	J-POWER EnTech Co., Inc.	Engineering services for atmospheric and water pollutant removal equipment	100.0
	Miyazaki Wood Pellet Co., Ltd.	Operation of manufacturing facilities of wood pellets and procurement of forest offcut	98.3
	JM Activated Coke, Inc.	Manufacturing, sales, and marketing of activated coke	90.0
	EPDC CoalTech and Marine Co., Ltd.	Marine transportation of ash and fly ash	100.0 (100.0)
	and 10 other companies		
	<b>Overseas Business</b>		
	J-Power Investment Netherlands B.V.	Management of investments	100.0
	J-POWER Holdings (Thailand) Co., Ltd.	Management of investments	100.0 (100.0)
	J-POWER Generation (Thailand) Co., Ltd.	Management of investments, research and development of projects	100.0 (100.0)
	Gulf JP Co., Ltd.	Management of investments	60.0 (60.0)
	Gulf JP UT Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP NS Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP NNK Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP CRN Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP NK2 Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP TLC Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP KP1 Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP KP2 Co., Ltd.	Thermal power business	60.0 (60.0)
	Gulf JP NLL Co., Ltd.	Thermal power business	45.0 (45.0)
	J-POWER North America Holdings Co., Ltd.	Management of investments	100.0
	J-POWER USA Investment Co., Ltd.	Management of investments	100.0 (100.0)
	J-POWER USA Development Co., Ltd.	Management of investments, research and development of projects	100.0 (100.0)
	JP Renewable Europe Co., Ltd.	Management of investments	100.0
	J-POWER Consulting (China) Co., Ltd.	Management of investments, research and development of projects	100.0
	and other 16 companies		

	Company Name	Main Businesses	Equity Stake (%)
Consolidated Subsidiaries	<b>Other Businesses</b>		
	Kaihatsu Hiryou Co., Ltd.	Production and sales of fertilizer using ash	100.0
	Japan Network Engineering Co., Ltd.	Telecommunications; operation and maintenance of telecommunications facilities	100.0
	Omuta Plant Service Co., Ltd.	Operation and maintenance of a waste-fueled power generation plant	100.0
	J-POWER Latrobe Valley Pty. Ltd.	Participating in Australian Brown Coal Hydrogen Pilot Test Project	100.0
	Biocoal Osaka-Hirano Co., Ltd.	Construction and operation of a sewage sludge-based fuel manufacturing facility	60.0
	Green Coal Saikai Co., Ltd. and 1 other company	Operation of an ordinary waste-based fuel manufacturing facility	60.0
Affiliates Accounted for by the Equity Method	<b>Electric Power Business</b>		
	Kashima Power Co., Ltd.	Thermal power business	50.0
	TOSA POWER Inc.	Thermal power business	45.0
	Osaki CoolGen Corporation	Large-scale demonstration trials of oxygen-blown IGCC and CO <sub>2</sub> separation and capture	50.0
	ENERES Co., Ltd.	Energy-related consulting business, power generation business, etc.	41.0
	Yuzawa Geothermal Power Generation Corporation	Geothermal power business	50.0
	Hibiki Wind Energy Co., Ltd.	Offshore wind power generation surveying	40.0
	Suzuyo-Power Co., Ltd.	Electricity sale	49.9
	Appi Geothermal Energy Corporation and 6 other companies	Geothermal power business	15.0
	<b>Overseas Business</b>		
	Gulf Electric Public Co., Ltd.	Management of investments	49.0 (49.0)
	Gulf Power Generation Co., Ltd.	Thermal power business	49.0 (49.0)
	Nong Khae Cogeneration Co., Ltd.	Thermal power business	49.0 (49.0)
	Samutprakarn Cogeneration Co., Ltd.	Thermal power business	49.0 (49.0)
	Gulf Cogeneration Co., Ltd.	Thermal power business	49.0 (49.0)
	Gulf Yala Green Co., Ltd.	Thermal power business	49.0 (49.0)
	EGCO Green Energy Co., Ltd.	Management of investments	26.0 (26.0)
	EGCO Cogeneration Co., Ltd.	Thermal power business	20.0 (20.0)
	Roi-Et Green Co., Ltd.	Thermal power business	— [95.0]
	J-POWER USA Generation, L.P.	Management of investments	50.0 (50.0)
	Birchwood Power Partners, L.P.	Thermal power business	50.0 (50.0)
	Tenaska Pennsylvania Partners, LLC	Thermal power business	25.0 (25.0)
	Green Country Energy, LLC	Thermal power business	— [100.0]
	Pinelawn Power LLC	Thermal power business	— [100.0]
	Equus Power I, L.P.	Thermal power business	— [100.0]
	Edgewood Energy, LLC	Thermal power business	— [100.0]
	Shoreham Energy, LLC	Thermal power business	— [100.0]
	Orange Grove Energy, L.P.	Thermal power business	— [100.0]
	Elwood Energy, LLC	Thermal power business	— [100.0]
	Tenaska Virginia Partners, L.P.	Thermal power business	— [30.0]
	Tenaska Frontier Partners, Ltd.	Thermal power business	— [25.0]
	JM Energy Co., Ltd.	Management of investments	50.0
	Shaanxi Hanjiang Investment & Development Co., Ltd.	Hydroelectric power business	27.0
	China Resources Power (Hezhou) Co., Ltd.	Thermal power business	— [34.0]
	Chiahui Power Corporation	Thermal power business	40.0 (40.0)
	PT. BHIMASENA POWER INDONESIA	Thermal power business	34.0
	CBK Netherlands Holdings B.V.	Management of investments	50.0 (50.0)
	CBK Power Co., Ltd.	Hydroelectric power business	— [100.0]
	Triton Knoll Offshore Wind Farm Ltd.	Wind power business	25.0 (25.0)
	and 48 other companies		

- Notes: 1. The percentages in parentheses present indirect holding ratios and are included in the percentages above. Those shown in brackets are the ratios held by closely related parties or parties in agreement and excluded from the percentages above.
2. JPec Co., Ltd., J-POWER RESOURCES Co., Ltd., J-POWER AUSTRALIA PTY. LTD., J-POWER Holdings (Thailand) Co., Ltd., Gulf JP Co., Ltd., and JP Renewable Europe Co., Ltd. are specified subsidiaries.
3. On April 1, 2020, Electric Power Development Electricity Transmission Business Division Co., Ltd. was renamed J-POWER Transmission Network Co., Ltd.
4. On August 1, 2020, JPec Co., Ltd. was renamed J-POWER Generation Service Co., Ltd.



# J-POWER Group Facilities

## Power Generation Facilities in Operation<sup>1</sup> (As of March 31, 2020)

	Generation Capacity	Owned Capacity
<b>Power Generation Facilities in Operation (Domestic, Overseas)</b>	<b>40,322 MW</b>	<b>24,285 MW</b>
	Generation Capacity	Owned Capacity
<b>Domestic Total (97 bases)</b>	<b>17,648 MW</b>	<b>17,392 MW</b>

Type	Power Plants	Location (Prefecture)	River System	Start of Operation (Year)	Output Capacity (MW)
Hydroelectric	Horoka	Hokkaido	Tokachigawa	1965	10
	Nukabira	Hokkaido	Tokachigawa	1956	44
	Metou No. 1	Hokkaido	Tokachigawa	1958	27
	Metou No. 2	Hokkaido	Tokachigawa	1958	28
	Ashoro	Hokkaido	Tokachigawa	1955	40
	Honbetsu	Hokkaido	Tokachigawa	1962	25
	Kumaushi	Hokkaido	Tokachigawa	1987	15
	Satsunagawa	Hokkaido	Tokachigawa	1997	8
	Kuttari	Hokkaido	Tokachigawa	2015	0.5
	Kumaoi	Hokkaido	Ishikarigawa	1957	5
	Towa	Iwate	Kitagami-gawa	1954	27
	Isawa No. 1	Iwate	Kitagami-gawa	2014	14
	Shimogo (Pumped storage plant)	Fukushima	Aganogawa	1988	1,000
	Otsumata	Fukushima	Aganogawa	1968	38
	Okutadami	Fukushima	Aganogawa	1960	560
	Okutadami (Ecological Flow)	Fukushima	Aganogawa	2003	3
	Otori	Fukushima	Aganogawa	1963	182
	Tagokura	Fukushima	Aganogawa	1959	400
	Tadami	Fukushima	Aganogawa	1989	65
	Taki	Fukushima	Aganogawa	1961	92
	Kurotani	Fukushima	Aganogawa	1994	20
	Kuromatagawa No. 1	Niigata	Shinanogawa	1958	62
	Kuromatagawa No. 2	Niigata	Shinanogawa	1964	17
	Suezawa	Niigata	Shinanogawa	1958	2
	Aburumagawa	Niigata	Shinanogawa	1985	5
	Okukiotsu (Pumped storage plant)	Niigata	Shinanogawa	1978	1,000
	Okukiotsu No. 2 (Pumped storage plant)	Niigata	Shinanogawa	1996	600
	Numappara (Pumped storage plant)	Tochigi	Nakagawa	1973	675
	Hayakido	Nagano	Tenryugawa	1985	11
	Misakubo	Shizuoka	Tenryugawa	1969	50
	Shintoyone (Pumped storage plant)	Aichi	Tenryugawa	1972	1,125
	Sakuma	Shizuoka	Tenryugawa	1956	350
	Sakuma No. 2	Shizuoka	Tenryugawa	1982	32
	Akiba No. 1	Shizuoka	Tenryugawa	1958	47
	Akiba No. 2	Shizuoka	Tenryugawa	1958	35
	Akiba No. 3	Shizuoka	Tenryugawa	1991	47
	Funagira	Shizuoka	Tenryugawa	1977	32
	Miboro	Gifu	Shougawa	1961	215
	Miboro No. 2	Gifu	Shougawa	1963	59
	Ogamigou	Gifu	Shougawa	1971	20
	Nagano (Pumped storage plant)	Fukui	Kuzuryugawa	1968	220
	Yugami	Fukui	Kuzuryugawa	1968	54
	Konokidani	Fukui	Kuzuryugawa	2016	0.2
	Tedorigawa No. 1	Ishikawa	Tedorigawa	1979	250
	Nishiyoshino No. 1	Nara	Shingugawa	1956	33
	Nishiyoshino No. 2	Nara	Kinokawa	1955	13
	Totsugawa No. 1	Nara	Shingugawa	1960	75
	Totsugawa No. 2	Wakayama	Shingugawa	1962	58
	Owase No. 1	Mie	Shingugawa, Choushigawa	1962	40
	Owase No. 2	Mie	Choushigawa	1961	25
	Ikehara (Pumped storage plant)	Nara	Shingugawa	1964	350
	Nanairo	Wakayama	Shingugawa	1965	82
	Komori	Mie	Shingugawa	1965	30
	Yanase	Kochi	Naharigawa	1965	36
	Futamata	Kochi	Naharigawa	1963	72
	Nagayama	Kochi	Naharigawa	1960	37
	Sameura	Kochi	Yoshinogawa	1972	42
	Setoishi	Kumamoto	Kumagawa	1958	20
	Sendaigawa No. 1	Kagoshima	Sendaigawa	1965	120
	Sendaigawa No. 2	Kagoshima	Sendaigawa	1964	15
<b>Total (Domestic Hydroelectric, 60 plants)</b>					<b>8,560</b>

Type	Power Plants	Location (Prefecture)	Start of Operation (Year)	Output Capacity (MW)	Ownership (%)	Owned Capacity (MW)
Wind Power	Sarakitomanai Wind Farm	Hokkaido	2001	15	100	15
	Tomamae Winvilla	Hokkaido	2000	31	100	31
	Shimamaki Wind Farm	Hokkaido	2000	5	100	5
	Setana Seaside	Hokkaido	2005	12	100	12
	Setana-Osato	Hokkaido	2020	50	100	50
	Kaminokuni Wind Farm	Hokkaido	2014	28	100	28
	Ohma Wind Farm	Aomori	2016	20	100	20
	Green Power Kuzumaki	Iwate	2003	21	100	21
	Nikaho Kogen	Akita	2001	25	100	25
	Nikaho No. 2	Akita	2020	41	100	41
	Yurihonjo Bayside	Akita	2017	16	100	16
	Koriyama-Nunobiki	Fukushima	2007	66	100	66
	Hiyama Kogen	Fukushima	2011	28	100	28
	Tokyo Bayside	Tokyo	2003	2	100	2
	Irouzaki	Shizuoka	2010	34	100	34
	Tahara Bayside	Aichi	2005	22	100	22
	Tahara	Aichi	2004	2	100	2
	Awara-Kitagata	Fukui	2011	20	100	20
	Yokichi no Sato Wind Park	Yamaguchi	2003	5	100	5
	Minami Ehime	Ehime	2016	29	100	29
	Nagasaki-Shikamachi Wind Farm	Nagasaki	2005	15	70	11
	Aso-Nishihara Wind Farm	Kumamoto	2005	18	100	18
	Aso-Oguni Wind Farm	Kumamoto	2007	9	100	9
	Minami Oosumi	Kagoshima	2004	25	100	25
<b>Total (Domestic Wind Power, 24 farms)</b>				<b>535</b>		<b>531</b>
Geothermal	Wasabizawa	Akita	2019	46	50	23
<b>Total (Domestic Geothermal, 1 plant)</b>				<b>46</b>		<b>23</b>

Type	Power Plants	Location (Prefecture)		Start of Operation (Year)	Output Capacity (MW)	Ownership (%)	Owned Capacity (MW)
Coal Fired	Isogo	Kanagawa	New No. 1	2002	600	100	600
			New No. 2	2009	600	100	600
	Takasago	Hyogo	No. 1	1968	250	100	250
			No. 2	1969	250	100	250
	Takehara <sup>2</sup>	Hiroshima	No. 3	1983	700	100	700
	Tachibanawan	Tokushima	No. 1	2000	1,050	100	1,050
			No. 2	2000	1,050	100	1,050
	Matsushima	Nagasaki	No. 1	1981	500	100	500
			No. 2	1981	500	100	500
	Matsuura	Nagasaki	No. 1	1990	1,000	100	1,000
			No. 2	1997	1,000	100	1,000
	Ishikawa Coal	Okinawa	No. 1	1986	156	100	156
			No. 2	1987	156	100	156
Thermal (J-POWER): 7 power plants					7,812		7,812
Gas Fired (CCGT) <sup>3</sup>	J-POWER SUPPLY & TRADING Ichihara	Chiba			108	100	108
	Mihama Seaside Power Shinminato	Chiba			105	100	105
Coal Fired	Itoigawa	Niigata			149	64	95
	Tosa	Kochi			167	45	75
Demonstration tests facility	Osaki CoolGen	Hiroshima			166	50	83
	Thermal (Related companies): 5 power plants					694	
Total (Domestic Thermal, 12 plants)					8,506		8,278

1. Power generation facilities of the Electric Power Business segment and Overseas Business segment.
2. Takehara Thermal Power Plant New Unit No. 1 was shut down in April 2018 and Unit No. 2 in June 2019. Both are scheduled for replacement.
3. CCGT (combined cycle gas turbine): A combined cycle generating system that uses a gas turbine and a steam turbine driven by the exhaust gas from the gas turbine.

			Generation Capacity	Owned Capacity
Overseas Total (34 projects)			22,674 MW	6,893 MW

Countries	Type	Projects	Output Capacity (MW)	Ownership (%)	Owned Capacity (MW)	Power Purchasers	Validity of Purchase Agreement
Thailand	Gas Fired (CCGT)	7 SPPS <sup>1</sup>	790	—	456	EGAT <sup>2</sup> /Companies in the industrial park	Valid to 2038
		KP1	110	60	66		
		KP2	110	60	66		
		TLC	110	60	66		
		NNK	110	60	66		
		NLL	120	45	54		
		CRN	110	60	66		
		NK2	120	60	72		
	Gas Fired (CCGT)	Nong Seang	1,600	60	960	EGAT	Valid to 2039
	Gas Fired (CCGT)	U-Thai	1,600	60	960	EGAT	Valid to 2040
	Total (Consolidated)		3,990		2,376		
	Biomass (Chaff)	Roi-Et	9	25	2	EGAT	Valid to 2024
	Gas Fired (CCGT)	Rayong	112	20	22	EGAT/Companies in the industrial park	Valid to 2024
	Gas Fired (CCGT)	Samutprakarn	117	49	57	EGAT/Companies in the industrial park	Valid to 2020
	Gas Fired (CCGT)	Nong Khae	120	49	59	EGAT/Companies in the industrial park	Valid to 2021
	Biomass (Rubber Wood Waste)	Yala	20	49	10	EGAT	Valid to 2031
	Gas Fired (CCGT)	Kaeng Khoi 2	1,468	49	719	EGAT	Valid to 2033
	Total (Non-consolidated)		1,846		870		
Thailand (Total, 15 projects)			5,836		3,246		
The United States	Gas Fired (CCGT)	Tenaska Frontier	830	31	257	Exelon Generation Company, LLC	Valid to 2020
	Gas Fired (SCGT) <sup>3</sup>	Elwood Energy	1,350	50	675	PJM market	—
	Gas Fired (CCGT)	Green Country	795	50	398	Exelon Generation Company, LLC	Valid to 2022
	Coal Fired	Birchwood	242	50	121	Consolidated Edison, Inc.	Valid to 2021
	Gas Fired (CCGT)	Pinelawn	80	50	40	Long Island Power Authority	Valid to 2025
	Gas Fired (SCGT)	Equus	48	50	24	NYISO market	—
	Gas Fired (CCGT)	Fluvanna	885	15	133	Shell Energy North America	Valid to 2024
	Gas Fired (SCGT)	Edgewood	88	50	44	Long Island Power Authority	Valid to 2023
	Jet Fuel (SCGT)	Shoreham	90	50	45	Long Island Power Authority	Valid to 2020
	Gas Fired (SCGT)	Orange Grove	96	50	48	San Diego Gas & Electric	Valid to 2035
Gas Fired (CCGT)	Westmoreland	925	25	231	PJM market	—	
The United States (Total, 11 projects)			5,429		2,016		
China	Hydroelectric	Hanjiang (Xihe, Shuhe)	450	27	122	Shaanxi Electric Power Company	Renewed every year <sup>5</sup>
	Mainly Coal Fired	Gemeng <sup>4</sup>	7,471	7	523	Shanxi Province Power Corporation	—
	Coal Fired	Hezhou	2,090	17	355	Guanxi Power Grid Co.	Renewed every year <sup>5</sup>
China (Total, 4 projects)			10,011		1,000		
Philippines	Hydroelectric	CBK (3 projects)	728	50	364	National Power Corporation	Valid to 2026
Taiwan	Gas Fired (CCGT)	Chiahui	670	40	268	Taiwan Power Company	Valid to 2028
Other countries/region (4 projects)			1,398		632		

## Major Transmission and Transformation Facilities (As of March 31, 2020)

### Transmission Facilities

Major Transmission Lines	Beginning of Operation (Year)	Location (Prefecture)	Distance (km)	Voltage (kV)
Tokachi Trunk Line	1956	Hokkaido	214.4	187
Hokkaido-Honshu HVDC Interconnection Line	1979	Hokkaido – Aomori	167.4	DC±250
Tadami Trunk Line	1959	Fukushima – Tokyo metropolitan area	216.2	275-500
Sakuma East Trunk Line	1956	Shizuoka – Tokyo metropolitan area	197.3	275
Sakuma West Trunk Line	1956	Shizuoka – Aichi	107.7	275
Miboro Trunk Line	1960	Gifu – Aichi	108.6	275
Honshu-Shikoku Interconnection Line	1994	Kagawa – Okayama	127.0	500
Kii Channel HVDC Interconnection Line	2000	Tokushima – Wakayama	99.8	DC±250
Nahari Trunk Line	1960	Kochi – Ehime	120.0	187
Kanmon Interconnection Line	1980	Fukuoka – Yamaguchi	64.2	500

- The 7 SPPs project, which commenced operation in 2013.
- EGAT: Electricity Generating Authority of Thailand (State-owned electric power utility in Thailand)
- SCGT (simple cycle gas turbine): A generating system using only a gas turbine.
- Gemeng International Energy Co., Ltd., is an electric power company that owns 14 power generation companies.
- Although power purchase agreements are renewed every year, J-POWER concludes memoranda of understanding regarding power grid connection and management with province-level transmission and distribution companies to, in principle, continuously purchase power for the duration of a given facility's operation.

### Substations

Substations	Beginning of Operation (Year)	Location (Prefecture)	Output (kVA)
Isawa	2012	Iwate	9,000
Minami Kawagoe	1959	Saitama	1,542,000
Nishi Tokyo	1956	Tokyo metropolitan area	1,350,000
Nagoya	1956	Aichi	1,400,000

### Frequency Converter Station

Frequency Converter Station	Beginning of Operation (Year)	Location (Prefecture)	Output (MW)
Sakuma	1965	Shizuoka	300

### AC/DC Converter Stations

AC/DC Converter Stations	Beginning of Operation (Year)	Location (Prefecture)	Output (MW)
Hakodate	1979	Hokkaido	600
Kamikita	1979	Aomori	600
Kihoku	2000	Wakayama	1,400
Anan	2000	Tokushima	1,400

## J-POWER Group Facilities

### Major Projects under Construction or Development (As of March 31, 2020)

	Generation Capacity	Owned Capacity
<b>Projects under Development (Domestic, Overseas)</b>	<b>8,016 MW</b>	<b>5,324 MW</b>

#### Domestic

Type		Projects	Location (Prefecture)	Status	Output Capacity (MW)	Ownership (%)	Owned Capacity (MW)	Start of operation
Nuclear		Ohma	Aomori	Under construction	1,383	100	1,383	To be determined
Coal Fired		Takehara New No. 1 (Replacement)	Hiroshima	Under construction	600	100	600	Jun. 2020
		Kashima Power	Ibaraki	Under construction	645	50	323	Jul. 2020
Hydroelectric		Yamaguchi Ube Power	Yamaguchi	Plan under review	—	—	—	—
		Shinkatsurazawa/Kumaoi	Hokkaido	Under construction	17	100	17	FY2022
		Ashoro (Repowering)	Hokkaido	Under construction	40	100	40	Construction completion in FY2022
		Ogamigou (Repowering)	Gifu	Preparing for repowering	20▶21	100	20▶21	Construction completion in FY2023
		Nagayama (Repowering)	Kochi	Preparing for repowering	37▶40	100	37▶40	Construction completion in FY2025
Wind Power	Onshore	Kuzumaki No. 2	Iwate	Under construction	45	100	45	FY2020
		Kaminokuni No. 2 <sup>1</sup>	Hokkaido	Under construction	42	100	42	FY2021
		Minami Ehime No. 2	Ehime	Preparing for construction	Max 41	100	Max 41	—
		Wajima	Ishikawa	Preparing for development	Max 90	100	Max 90	—
		Reihoku Kunimiyama	Kochi	Preparing for development	51	100	51	—
		Seiyo Yusuvara	Ehime	Preparing for development	Max 163	100	Max 163	—
		Youra	Oita	Preparing for development	Max 65	100	Max 65	—
		Kita Kagoshima	Kagoshima	Preparing for development	Max 215	100	Max 215	—
		Tomamae (Replacement)	Hokkaido	Preparing for construction	31▶31	100	31▶31	—
		Shimamaki (Replacement)	Hokkaido	Preparing for construction	4▶4	100	4▶4	—
		Sarakitomanai (Replacement)	Hokkaido	Preparing for development	15▶15	100	15▶15	—
		Kuzumaki (Replacement)	Iwate	Preparing for development	21▶21	100	21▶21	—
		Nikaho (Replacement)	Akita	Preparing for development	25▶25	100	25▶25	—
		Offshore	Hibikinada Offshore	Fukuoka	Preparing for development	Max 220	40	Max 88
	Geothermal		Appi	Iwate	Under construction	14.9	15	2
	Onikobe (Replacement)	Miyagi	Under construction	14.9	100	14.9	FY2023	
Domestic	Total			Max 3,609 <sup>2</sup>		Max 3,142 <sup>2</sup>		

#### Overseas

Type	Projects	Location	Status	Output Capacity (MW)	Ownership (%)	Owned Capacity (MW)	Start of operation
Coal Fired	Central Java	Indonesia	Under construction	2,000	34	680	FY2020
Offshore Wind	Triton Knoll	The United Kingdom	Under construction	857	25	214	2021
Gas Fired (CCGT)	Jackson	The United States	Under construction	1,200	100	1,200	2022
Solar	Wharton	The United States	Under development	350 <sup>3</sup>	25	88	2022
<b>Overseas</b>	<b>Total</b>			<b>4,407</b>		<b>2,182</b>	

1. Data for phase 1 construction of Kaminokuni No. 2. Planned maximum capacity of 120 MW.

2. Totals do not include the capacities of facilities that will replace plants currently in operation at the present or greater capacity.

3. Alternating current.

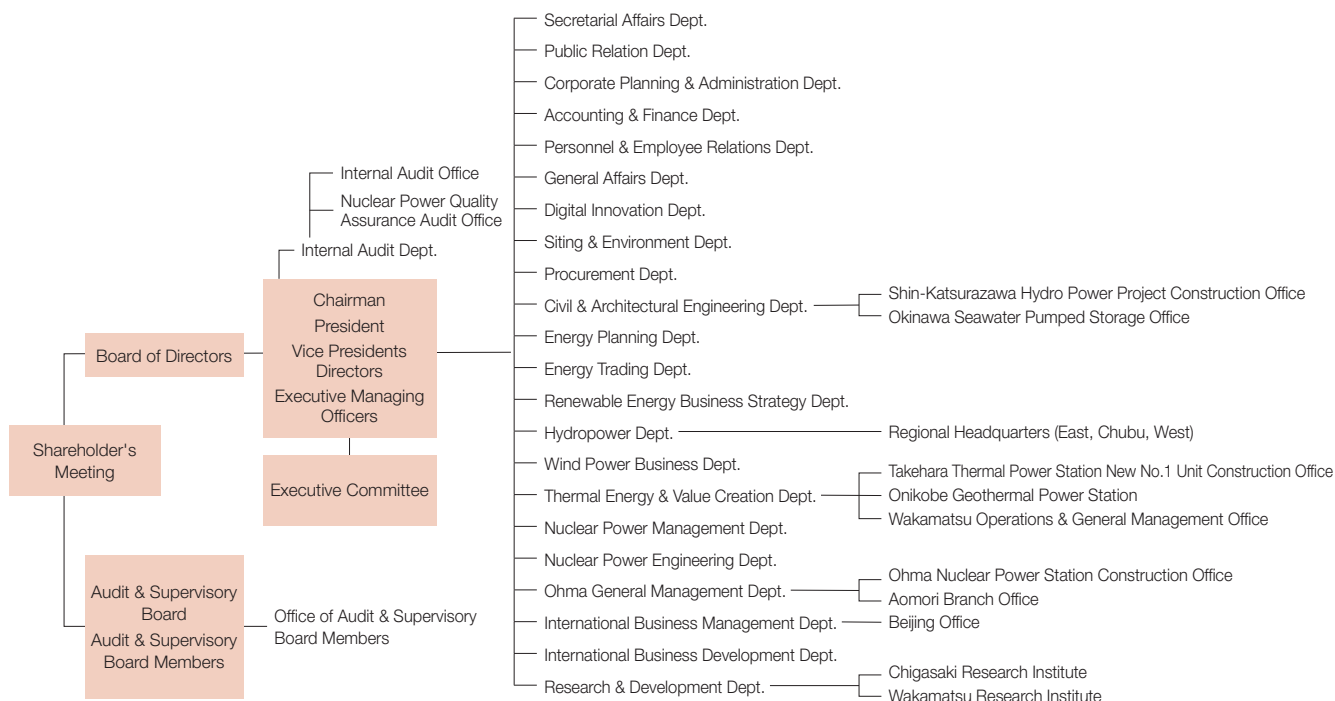
### Major Transmission/Transformation Development Plans

Project	Status	Capacity	Start of operation
Construction of the New Sakuma Frequency Converter Station and replacement and expansion of related transmission lines	Undergoing research and surveying	New Sakuma Frequency Converter Station: 300 MW Sakuma East Trunk Line: Approx. 125 km Sakuma West Trunk Line: Approx. 14 km	Expansion scheduled for completion at the end of fiscal 2027

# Corporate Profile/Stock Information (As of March 31, 2020)

<b>Corporate Name</b>	Electric Power Development Co., Ltd.	<b>Major Offices</b>
<b>Communication Name</b>	J-POWER	<ul style="list-style-type: none"> <li>• Head Office: 15-1, Ginza 6-chome, Chuo-ku, Tokyo</li> <li>• East Regional Headquarters: Kawagoe-shi, Saitama</li> <li>• Chubu Regional Headquarters: Kasugai-shi, Aichi</li> <li>• West Regional Headquarters: Osaka-shi, Osaka</li> <li>• North Regional Transmission System Center*: Nanae-cho, Kameda-gun, Hokkaido</li> <li>• East Regional Transmission System Center*: Kawagoe-shi, Saitama</li> <li>• Central Regional Transmission System Center*: Kasugai-shi, Aichi</li> <li>• West Regional Transmission System Center*: Kurashiki-shi, Okayama</li> </ul>
<b>Date of Establishment</b>	Sept. 16, 1952	* Transferred to J-POWER Transmission Network Co., Ltd. on April 1, 2020.
<b>Headquarters</b>	15-1, Ginza 6-chome, Chuo-ku, Tokyo 104-8165, Japan	
<b>Paid-in Capital</b>	¥180,502,169,192	
<b>Number of Shares Authorized</b>	660,000,000	
<b>Number of Shares Issued</b>	183,051,100	
<b>Number of Shareholders</b>	30,916	
<b>Stock Exchange Listing</b>	Tokyo Stock Exchange	<b>Major Overseas Subsidiaries</b>
<b>Independent Public Accountants</b>	Ernst & Young ShinNihon LLC	<ul style="list-style-type: none"> <li>• J-POWER USA Development Co., Ltd.</li> <li>• J-POWER Generation (Thailand) Co., Ltd.</li> <li>• J-POWER Consulting (China) Co., Ltd.</li> </ul>
<b>Transfer Agent</b>	Sumitomo Mitsui Trust Bank, Limited	

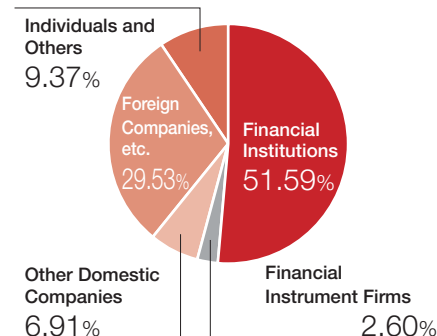
## Organization Chart (As of August 1, 2020)



## Major Shareholders (Top 10/As of March 31, 2020)

Name or Designation	Number of Shares Held (Thousands of Shares)	Percentage of Total Shares Issued (%)
Japan Trustee Services Bank, Ltd. (Trust Account)	12,284	6.71
The Master Trust Bank of Japan, Ltd. (Trust Account)	12,276	6.71
Nippon Life Insurance Company	9,152	5.00
Japan Trustee Services Bank, Ltd. (Trust Account 9)	8,044	4.39
Mizuho Bank, Ltd.	6,055	3.31
JP MORGAN CHASE BANK 385632	5,596	3.06
J-POWER Employees Shareholding Association	4,061	2.22
Sumitomo Mitsui Banking Corporation	3,436	1.88
MUFG Bank, Ltd.	3,331	1.82
Japan Trustee Services Bank, Ltd. (Trust Account 5)	3,239	1.77

## Composition of Shareholders





**Electric Power Development Co., Ltd.**

Corporate Planning & Administration Department  
Corporate Planning Office

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