

# JERA GROUP CORPORATE COMMUNICATION BOOK 2021 (Integrated Report)

From Japan to the world

**JAPAN'S ENERGY FOR A NEW ERA** 

Strategies

Jela

# **Taking Energy into a New Era**

# Mission

To provide cutting edge solutions to the world's energy issues

Through our global operations we bring the world's leading energy solutions to Japan, helping to solve the energy issues facing the country.
We seek to establish new energy supply models for Japan while also offering energy supply models established in Japan to other countries that face similar energy issues, helping to solve the world's energy issues.

# Vision

# Global leader in LNG and renewables, sparking the transition to a clean energy economy

As we look toward 2025, the energy solutions we offer will focus mainly on two businesses: the LNG value chain business and the large-scale renewable energy business.

These businesses are complementary; renewable energy with variable power generation output is complemented by flexible, clean LNG thermal power generation. With demand expected to grow globally, particularly in Asia, we aim to become a leader in these two businesses.

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## **Editorial Policy**

### About This Report

The JERA Group Corporate Communication Book was first published in FY2020 as a tool for encouraging communication with our stakeholders.

The FY2021 report was published as an integrated report summarizing financial and non-financial information about the strategies and foundations (ESG) to create and realize the value of the JERA Group. This includes specific initiatives aimed at the achievement of "JERA Zero CO<sub>2</sub> Emissions 2050" announced in October 2020.

Our intent with this report was to convey the diligence with which we are working to resolve social issues and enhance corporate value through the cooperation of every department and the united efforts of all of our employees.

Note that this report was published after being reported by "the Sustainability Promotion Committee," which is under the direct control of the Board of Directors and is chaired by the president. Through this report, we hope to engage in discussion with our stakeholders and welcome many opinions.

### A Note Regarding Forward-Looking Statements

Forward-looking statements included in this report regarding the Group's plans, strategies, performance forecasts, and other matters are based on information available at the time the report was created and include potential risks and uncertainties. Accordingly, please be aware that actual future performance and the business environment may differ from those presented in this report.

Scope of the report/statistics	JERA Co., Inc., and Group Companies (All mentions of "the company," "we," and "our" in this report refer to JERA Co., Inc. unless otherwise noted)				
Period covered by the reportFY2020 (April 1, 2020 to March 31, 2021) The report includes some of latest activities after this period.					
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# JERA's Origins The Path to Business Consolidation

JERA was created by the consolidation of the fuel and thermal power departments of the Tokyo Electric Power Company and the Chubu Electric Power Company with the concurrent aims of creating a global energy company capable of competing in the global energy market, providing a stable supply of globally competitive energy, and enhancing corporate value.

JERA Co., Inc. was established on April 30, 2015 to form a comprehensive alliance between Tokyo Electric Power Company (as it was known then) and Chubu Electric Power Co., Inc. for their entire supply chains from fuel upstream and procurement business to power generation.

With the aim of becoming a Japan-based global energy company, JERA proceeded to consolidate businesses in stages after its establishment, and with the April 1, 2019 consolidation of existing thermal power generation businesses established a continuous value chain from fuel upstream and procurement business to power generation and electricity and gas wholesaling, earning its status as an energy company with power generation capacity equivalent to half of Japan's thermal power generation output and a fuel transaction volume among the world's highest.



Completed the consolidation of value chains in April 2019 after expanding the scope of consolidation four years after establishment in April 2015



# **JERA's Business Model**

Creating a global business entity and enhancing competitiveness with the aim of achieving a balance between a stable, economical energy supply and enhanced corporate value

JERA owns businesses across the entire supply chains for fuel and thermal power, from fuel upstream business (gas field development) to fuel transportation and storage (fuel terminal operation) to power generation and wholesaling.

Thus, we will engage in borderless management of all businesses from fuel procurement to power generation and sales in three profit centers—business development, optimization, and O&M\* engineering—to establish a system capable of pursuing expertise and excellence and maximizing synergy in each business. \*0&M: Operation and maintenance



# **Message from the Chairman**

JERA will, through the realization of JERA's "Mission and Vision," contribute to the development of a sustainable society in which the economy and the environment coexist, continuously enhance our corporate value and, in turn, aim to be a global company indispensable to people around the world.

JERA was established in April 2015 with the aim of creating a globally competitive energy company in Japan. As Japan's largest power generator and a global energy company, we have established a "Mission and Vision" that lays out our concrete initiatives for fulfilling our social responsibilities of continuing to support industries and fulfilling lifestyles by maintaining Japan's energy supply while at the same time working to resolve the world's energy issues.

# Mission To provide cutting edge solutions to the world's energy issues

### Vision

# Global leader in LNG and renewables, sparking the transition to a clean energy economy

Responding to the issue of climate change is an urgent matter. We are an energy company with power generation capacity equivalent to half of Japan's thermal power generation output and a fuel transaction volume among the world's highest, and recognizing the need to reduce and eliminate global warming emissions, we are in position to provide proactive leadership in the realization of a low-carbon society. In turn, we also bear a responsibility to resolve this issue through the application of optimum solutions.

Accordingly, we announced our JERA Zero  $CO_2$  Emissions 2050 roadmap in October 2020. Per this roadmap, we will take on the challenge of achieving virtually zero  $CO_2$  emissions from our operations inside and outside Japan by 2050, a course of action that is aligned with the Green Growth Strategy being pursued by the Japanese government.

Still, there are many hurdles to clear with existing technology. We engaged in in-depth discussions among management and executives, including outside directors, regarding the establishment and announcement of this roadmap. Through these discussions, we affirmed that this challenge is embodied in our "Mission and Vision," and that JERA should take the initiative in showing the world its dedication to zero emissions. As a result, the Board of Directors was unanimous in its decision to enact and announce JERA Zero CO<sub>2</sub> Emissions 2050.

We recognize that it is not enough simply to announce the plan; we believe that its swift implementation is of the utmost importance. In addition, this endeavor is not something JERA can accomplish on its own. We will require the cooperation of many companies across the industrial spectrum and all of our other stakeholders, both domestically and internationally. We have a strong sense of duty and are well prepared to come together as a company to achieve zero emissions and contribute to the development of a sustainable society in which the economy and the environment coexist. Further, by continuously enhancing our corporate value through these initiatives, we will aim to be a global company that is indispensable to people around the world. You can expect JERA to continue to rise to the challenge.

Chairman Chairman of the Board

# **Toshihiro Sano**

# Message from the Chairman

# Strengthening Governance Is a Fundamental and Priority Initiative for JERA

The basic principle of JERA's corporate governance is to ensure an autonomous, independent corporate culture and a management system capable of fair, swift decision-making. Through this culture and management system, JERA maintains a strong and sound leadership and financial structure trusted by the global energy market.

In discussing the importance of governance in JERA, it is essential to first understand the purpose for which the company was established—in other words, JERA's mission. As touched on at the beginning, the mission of JERA is to benefit society through supplying globally competitive energy to Japan while competing successfully in challenging international energy markets as well as creating a new era of energy. This is our mission, and the backbone for achieving this mission is JERA's governance. Accordingly, continuously strengthening governance is a fundamental and priority initiative for JERA. We believe that we must remain firm and steadily adhere to the basic principle of our corporate governance, no matter how much the business environment may change.

# Focusing on Increasing the Effectiveness of the Board of Directors as Chairman

In an age of VUCA,\* management issues are becoming more diverse and complex. Against this backdrop, the role of the Board of Directors is becoming increasingly important for JERA in order to achieve growth, further consolidate our global position, and enhance corporate value. In turn, we recognize that we must continue to increase the Board's effectiveness.

In FY2020, the COVID-19 pandemic made gathering and holding meetings of the Board of Directors difficult. Nevertheless, to continue to ensure the effectiveness of the Board's discussions and supervision of the execution of duties, we have worked to enhance deliberations and establish supporting initiatives. Specifically, we worked to hold deep Directors' discussions on fundamental issues and adjust the selection of discussion topics for Board of Directors meetings so that deliberations focus more on strategic and mid- to long-term items such as growth strategies and climate change. In addition, we believe that sound Board of Directors decision-making requires high-quality discussion based on thorough provision in advance of information and explanations to directors. We have made efforts to enhance information provided to directors and worked to eliminate disparities in information between directors to create an environment enabling as many opinions and questions to be presented as possible. Further, to evaluate the effectiveness of the Board of Directors, we used surveys and other means to gather feedback from all directors, and the directors deliberated steps for improving the Board's effectiveness.

# Vigorously Promoting Diversity and Inclusion and Aiming to Be a Global Leader as "One Team JERA"

I assumed the office of chairman in April 2019, and since that time, I have consistently focused on diversity and inclusion (D&I). D&I is essential to the realization of JERA's "Mission and Vision." JERA was formed through the consolidation of the fuel and thermal power departments of the Tokyo Electric Power Company and Chubu Electric Power Company, and inherited many assets and human resources from these shareholders. The key differentiator that gives us competitive advantage is maintaining a continuous value chain while encouraging independent creativity in each process along the value chain. A deep integration of the elements of our value chain is critical to maximizing the value of our business model and our unique assets, and the foundation of this integration is D&I.

Foundation for Value

Creation: ESG

Accordingly, we formulated a commitment to promoting D&I in November 2020. We will leverage the special qualities of each and every one of our human resources—the company's most valuable business resource—and strongly support their individual growth. In addition, in pursuit of ensuring the diversity of our Board of Directors, we have created a matrix of the expertise, skills, and other attributes of the directors that we need, and are using it to investigate areas for reinforcement while comparing it against the company's medium-term and long-term strategies. I am well aware of the reality that there are still too few women in decision-making roles and intend to promote active participation by women at all levels in an effort to become a global organization where women can exhibit their skills and flourish more than ever before.

The true integration I aim for is that of our employees' awareness – "One Team JERA." Without true integration, we will never become the kind of global leader we aim to be. To be among the best in the world, we must break free from outdated values and stereotypes and introduce a diverse, inclusive and global mindset. By ensuring that this mindset takes hold and endures in our employees, we will achieve true integration and the maximization of the synergies that can be derived from our value chain.



\*VUCA: An acronym for Volatility, Uncertainty, Complexity, and Ambiguity.

oundation for Value

Creation: ESG

# **Message from the President**

# JERA's "Mission and Vision" is Our Purpose and Our Value Creation Story

Our mission to provide cutting-edge solutions to the world's energy issues. As a global leader in LNG and renewables, JERA's vision is to spark the transition to a clean energy economy. To realize this vision, we are proactively engaged in the resolution of a variety of energy-related issues both domestically and overseas, and in turn are sustainably enhancing our corporate value.

In my view, JERA's corporate value rests on our ability to resolve social issues through our business and contribute to the development of society, coupled with a corporate culture that is a shining beacon in which our employees can take pride. A company that is truly needed by society and a highly valued presence will create further growth, and this is exactly the value creation story that JERA envisions. "JERA Zero CO<sub>2</sub> Emissions 2050" announced in October 2020 is an integral part of our "Mission and Vision." It is also a declaration of action to the world as we aim to become a global leader. In realizing JERA Zero CO<sub>2</sub> Emissions 2050, we will fully leverage our strengths and assets and take a three-pronged approach.

# Three Approaches of JERA Zero CO<sub>2</sub> Emissions 2050

- 1 Complementarity between Renewable Energy and Zero  $\mbox{CO}_2$  Emission Thermal Power Generation
- 2 Establishment of Roadmaps Suitable for Each Country and Region
- 3 Adoption of "Smart Transition"

The key takeaway here is that we will be introducing renewable energy, and to support this introduction we will use existing thermal power generation facilities while steadily reducing CO<sub>2</sub> emissions in stages. One of our most pressing issues at the moment is the early establishment of technologies for zero CO<sub>2</sub> emission thermal power generation. Accordingly, we are building a demonstration project for co-firing with ammonia, a promising fuel technology that does not emit CO<sub>2</sub>, with start-up planned for FY2024. We aim to commence full-scale operation by 2030. In addition to technical issues, we will take on other issues such as the challenges of improving the economics of decarbonization and developing a secure supply chain. The achievement of a decarbonized society is a challenge shared by all humanity. As a global leader supporting the future of energy, we will take the lead in realizing a decarbonized society and contribute to the formation of a sustainable society. This is the first integrated report that we have compiled for the purpose of introducing our value creation and ESG initiatives to our stakeholders. We look forward to dialogue with you and working together toward the sustainable development of society.

### President

# Satoshi Onoda

### **Message from the President**

### Achieving Target Income Levels Two Years Running, Focusing on DX to Achieve Business Plan

We are steadily moving forward with the business plan we formulated in April 2019, and we are working to achieve consolidated net income targets of approximately 100 billion yen<sup>\*1</sup> from FY2019 to FY2021 and at least 200 billion yen<sup>\*1</sup> by FY2025.

In FY2020, despite the negative impacts of the COVID-19 pandemic, we achieved our target profit level for the second consecutive year since FY2019 due to improvement in the cost competitiveness of our domestic power generation business, as well as favorable operating results at the Freeport LNG project in the US throughout the year and strong performance by our fuel trading business. We credit this to the JERA Group's strengths in building a business portfolio in which we participate throughout the fuel value chain from upstream to power generation and our ability to generate profit from each link in the value chain.

As electricity and gas markets mature, new markets are created, and competition intensifies domestically in Japan, JERA can create new business opportunities. In addition, the current draft of Japanese government's Sixth Strategic Energy Plan lays out a path for energy policy to achieve carbon neutrality by 2050, and presents a composition of power sources unlike its precedents.

In response to these changes in the business environment, we are continuing to focus on improving profitability throughout the entire value chain. We are doing this by strengthening our power supply portfolio through replacement of facilities to boost efficiency of domestic power generation, reinforcing our trading function by leveraging fuel procurement on a scale that is one of the largest in the world, and participating in upstream businesses. With regard to overseas business, we have steadily accumulated results such as offshore wind power in Taiwan and investment in the largest independent power producer in Bangladesh. There are also numerous new projects that we are currently developing, and we will continue to carefully select superior business opportunities and seek further growth.

We are also focusing on DX<sup>\*2</sup> to achieve our business plan and realize growth. By making use of continuously evolving information technology, we will build a new business model for the power generation industry. JERA will evolve into a data-driven company, meaning a group of professionals who can utilize the information, experience, and technologies that we have gathered from our strengths—one of the world's largest facility portfolios and the operational track record of that portfolio. We launched our IT and Digital Transformation Project in July 2019, promoting DX as a companywide initiative.

One example is our Digital Power Station Project. Based on the DX vision formulated in October 2020, this project will transform power plant operation through the use of digital technology. By combining our unique Kaizen (constant improvement) capabilities with our technical prowess and the latest digital technology, we build an all-in-one power plant facility and human workload package. This is why we will create an advanced power station operation system harnessing data and Al with the aim of improving the competitiveness of our power generation equipment and market responsiveness.

We will continue to steadily implement these initiatives and expand into new business domains. In doing so, we will accelerate the shift in our business portfolio by changing the ratio of domestic power generation business to overseas power generation business to fuel business from the current 6:2:2 to a ratio of 4:3:3 by FY2025. We will also pursue the maximization of synergies through business integration.

## Strengthening Value Creation and ESG Initiatives Based on JERA's Materialities

Foundation for Value

Creation: ESG

In order to grow sustainably while adapting flexibly to changes in the business environment amid the increasing uncertainty of the modern world, it is important to fully understand and manage the impact of the external environment on our business and the effects of our business activities on society and stakeholders. Accordingly, in FY2020, we analyzed matters such as the external environment and our business strategies in terms of both opportunities and risks to identify priority issues (JERA's Materialities). Currently, we are working on developing goals and KPIs\* for the five categories and 22 issues that we have identified, while examining their relationship to corporate value. In addition, of the issues which we have identified, there are those that require a realignment of shared values across the Group and the establishment of a course of action for initiatives. For these, we are formulating policies for each and strengthening initiatives. We are also working to improve disclosure of ESG-related information.

\*KPI: Key performance indicator.

## Pursuing JERA's Unique Approach to Value Creation

There are many countries in the world experiencing such remarkable growth that the supply of power is unable to keep up. There are also many areas that remain non-electrified, and there are many countries and regions that are in need of power generation facilities. JERA will not only provide optimal, environmentally conscious power solutions to these countries and regions, but also create jobs via the power facility construction process and, through the provision of technology and expertise, cultivate human resources. In turn, these will serve as springboards for further growth and development of industries, communities, and societies. We believe that, in aiming to be a global company, JERA is expected to contribute to the continued prosperity and happiness of the countries and regions where we have business activities

and of the people who live there. JERA's unique approach to value creation ties into Goal 7 of the SDGs—clean and affordable energy—and leads to the achievement of other targets while also enhancing corporate value.

This approach is one of the most exciting and rewarding aspects of being an infrastructure company: the happiness of our stakeholders is the driver and energy for our further growth. Together with all our employees, with their hopes and dreams for the future, I will seek to enhance our value creation. I will aim to build a corporate culture in which all our employees can be proud to work for JERA and to make JERA a company that is truly indispensable to society.



\*1 Excludes fuel cost adjustments. \*2 DX: Digital Transformation

Financial and Corporate

# **Value Creation Process**

The value creation process of JERA is a graphical representation of our vision to create value through the global expansion of the company's business domains and the enhancement of value along its value chain. We aim to balance maximizing the value we provide to society and our stakeholders with enhancing our corporate value through expanding the company's business not only in Japan but also globally, and by making the most of the entire value chain from upstream development of fuels to transportation, storage, power generation and sales, in addition to renewable energy.



# Value Creation Process (Decarbonization Strategy)

JERA's decarbonization strategy by 2050 consists of two pillars: (1) shift from the current thermal power generation centered on LNG to zero CO<sub>2</sub> emission thermal power generation (transition) that does not emit CO<sub>2</sub> during power generation, through promoting the introduction of greener fuels, and (2) develop and expand renewable energy such as offshore wind power. We aim to promote low-cost and speedy decarbonization while maintaining a stable supply of energy.

We are a data-driven company that makes decisions swiftly and accurately on the basis of data, with the aim of achieving medium- to long-term growth. We will also promote the creation of new value through DX.



# Message from the CFO

**Strengthening Initiatives to Enhance** Sustainable Corporate Value, Advancing **Dialogue with Our Stakeholders** 



## Looking Back on Our Business Plan

In the business plan we announced in April 2019, we set targets for 2025 of consolidated net income of 200 billion yen (excluding time lags\*) and a credit rating of A or higher. First, although there were temporary factors such as losses related to the sale of LNG and COVID-19, consolidated net income excluding time lags for FY2019 was 90.0 billion ven, and for FY2020, 111.6 billion ven, In FY2021, as well, we anticipate consolidated net income of 120.0 billion yen, exceeding the 110.0 billion yen presented in our business plan. I interpret this to mean that we are generally making steady progress toward achieving the target. In addition, we are maintaining our target of at least an A in our credit ratings currently obtained from three agencies, and I believe we are sustaining a sound financial structure. Furthermore, in the business plan, we set a goal of creating synergy effects at least 100 billion yen per year within five years from the consolidation of existing thermal power generation businesses in April 2019. With regard to the improved cost competitiveness in our domestic thermal power generation businesses and the creation of new profit sources, we are fully leveraging the respective

\*Profits and losses due to the time difference between changes in fuel prices and their reflection in sales prices



strengths inherited from Tokyo Electric Power and Chubu Electric Power while also combining them with our own new measures as we move forward with these endeavors. In FY2020, we realized synergy effects of about 45 billion yen (pretax; consisting of about 25 billion yen for increased cost competitiveness and about 20 billion yen for our LNG trading business and other new profit sources) relative to FY2018, reaching around half of our final goal in the second year of consolidation. I assess post-consolidation business development to be progressing smoothly.

Foundation for Value

Creation: ESG



## Current Initiatives Aimed at Enhancing Corporate Value

In order to enhance corporate value, we established a system with three business departments to respond to changes in both the domestic and global business environments. We also established more than 10 strategic business segments as management units by business domain and region. In the management of our portfolio based on these strategic business segments, for each segment, we are engaging in repeated discussion among managers and directors. At the same time, we are also formulating strategies, targets, and business and action plans; and periodically monitoring each segment's state of progress and risks. Through these measures, we are building a management platform that enables us to respond in a timely and appropriate manner to changes in the business environment. Furthermore, we are engaging to achieve both high profitability and reliable financial soundness by designing and implementing financial discipline. These include evaluating investment standards for securing value creation investments (guideline rates are established by business domain and region, after which EVA®\* is calculated based on the ROIC for individual projects and monitored), maintaining an awareness of required capital through integrated risk management (p. 39), and periodically investigating the optimal capital structure based on factors such as total risk exposure and credit ratings.

\*Economic Value Added, a registered trademark of Stern Value Management Ltd.

## Message from the CFO

### **Example 2** Future Initiatives Aimed at Further Enhancement of Corporate Value

With developments such as decarbonization and the reforms of electric power systems, the business environment surrounding JERA is changing at an unprecedented pace, both globally and locally. To support swift and flexible management decision-making and business development amid these circumstances, we are improving the sophistication of our business management, managerial accounting, and financial and accounting systems by DX Project, which aims to transform into a data-driven company, and expanding our global accounting and taxation structures.

Further, in such a business environment, I believe that diversity and professionalism, as well as leadership that is able to integrate and direct them, are essential components to make JERA competitive. Based on this belief, I place great importance on promoting the active participation of women, proactively engaging in mid-career recruiting, and transforming into a professional organization that responds nimbly to changes in the business environment. Taking the Finance and Accounting Department as an example, of the department's current staff of approximately 110 people, about one quarter are women, and more than half are mid-career hires. Through an organic blending of staff of various backgrounds and high-level expertise, with staff who have transferred from shareholders, we are realizing the creation of new value. We will continue to implement this initiative companywide.

In addition, in order to stay ahead of changes in the business environment and come up with appropriate measures, I believe it is essential that we consider not only organic growth but also M&As to supplement business resources. Accordingly, we have established a special unit under the supervision of the CFO, which is in charge of exploring, structuring, and executing M&A.

In addition to the above, from my position, I believe that financial strategy formulation and inculcation are particularly important. In July 2021, the Financial Strategy Section was established under the supervision of the CFO. This section is formulating financial strategies linked what JERA aims for based on JERA's "Mission and Vision," as well as our business strategies rooted in JERA's business characteristics. Even amid the changing business environment, we will stably and sustainably create corporate value by systematizing and actualizing our financial strategies and embedding them in our initiatives. We will also present JERA's unique business and foundation for growth to our stakeholders and explain to them our corporate value creation process and long-term vision.

### Financial Strategy Framework

Our financial strategy framework involves considering three main approaches. The first is "profitability, efficiency, and growth management," which leads to the creation of the EVA® that supports the enhancement of corporate value. Based on the investment standards for securing value-creation, we will establish companywide management goals such as ROIC, which indicates the eligibility

of investments to support JERA's sustainable growth. To firmly achieve these goals, I believe it is important to link them with the business targets of three business departments possessing various functions and characteristics, and strictly manage them. Further, we are also investigating the disclosure of our medium- and long-term capital allocations as a means of demonstrating the direction of the sustainable growth.

The second is "balance sheet management." In addition to our domestic power generation business, including zero  $CO_2$  emission thermal power generation and a renewable energy business, we support a lengthy value chain extending from upstream to fuel transportation, trading, and power generation spanning a wide area that includes North America, Asia, Australia, the Middle East, and Europe. Given that we have assets of more than four trillion yen to support these businesses, it is vital that we manage these assets appropriately through strict financial discipline. For overseas, renewable energy, and zero- $CO_2$ -emission-related businesses in which further investments are planned over the medium and long term, we will verify our optimal capital structure based on financial ratings and integrated risk amounts and set and manage financial soundness targets in addition to current initiatives. In this way, we will engage in more accurate balance sheet management.

The third is "highlighting the relationship between nonfinancial and financial information." We wish to clarify the relationship between our nonfinancial information and the enhancement of corporate value. This, in turn, will show that our sustainable initiatives to realize a decarbonized society, centering on "JERA Zero  $CO_2$  Emissions 2050," contribute to the improvement of medium- to long-term returns and the lowering of risk, and that they also lead to further enhancement of our corporate value.

#### Financial strategy framework (image)



I see our financial strategies as a tool for engaging with our diverse array of stakeholders. As we realize the further enhancement of sustainable corporate value, in order to receive recognition from our stakeholders, we will aim to disclose our financial strategies in ways that are easy to understand. We will also stimulate communication with our stakeholders through the process of formulating and disclosing this information, further deepening mutual understanding, and meeting stakeholder expectations.

# **Financial and Non-Financial Highlights**

To achieve JERA's "Mission and Vision," JERA is steadily implementing the six measures of the business plan we formulated in April 2019, with the aim of sustainably enhancing our corporate value. In addition, we will focus on promoting diversity and inclusion and strengthening corporate governance. We will also work to propose flexible work styles and provide career development support, and, further, ensure diversity in the Board of Directors.

Financial

Net income attributable to owners of parent



Despite fluctuations due to resource prices, net sales have been running at around 3 trillion ven. By segment, our domestic thermal power generation and gas supply businesses made up the majority, followed by our fuel-related and overseas power generation businesses.



Net income attributable to owners of parent increased significantly due to consolidation of existing power generation businesses and new sources of income including our trading business.

\*Profits and losses resulting from the time difference up until variation in fuel prices are reflected in sale prices.

\*FY2018 was prior to the consolidation of existing thermal power generation businesses and thus does not include profits and losses from time lags.

Cash flows from operating, investing, and financing activities/free cash flow (billion ven)



After the consolidation of existing thermal power businesses, cash flows from operating activities was strongly positive. Conversely, due to the replacement of domestic thermal power stations and overseas business investment, etc., cash flows from investing activities was significantly negative. However, this was within cash flows from operating activities.

### Return on equity (ROE) (with and without time lags) (%)

-O- ROE -O- ROE excluding time lags



After the consolidation of existing thermal power generation businesses, ROE was 16.0% (8.5% excluding time lags) for FY2019, and 9.8% (6.9% excluding time lags) for FY2020. We are moving forward with management of profitability, efficiency, and growth.

\*FY2018 was prior to the consolidation of existing thermal power generation businesses and thus does not include profits and losses from time lags.





Our Equity ratio remained stable at around 40%. We prepared for risks by making use of external funding for the capital needs in our business activities while maintaining good financial soundness. In FY2020, we issued our first ever corporate bonds.

Interest-bearing debt (billion ven)/Debt-to-Equitv(D/E) ratio\*



Interest-bearing debt increased significantly with the consolidation of existing thermal power businesses. Currently, we are conducting balance sheet management aiming for a D/E ratio of around 1.0. \*D/E ratio = Interest-bearing debt/Shareholder's equity.

\*With the consolidation of existing thermal power businesses in April 2019, we established a unified, continuous value chain from fuel upstream, procurement, and transportation to power generation and electricity and gas wholesaling.

## **Financial and Non-Financial Highlights**

FY2020 Domestic power generation output by type of fuel (TWh)



JERA is responsible for approximately 30% of the total power generated by electric utilities in Japan. Notably, a significant portion of electric power is generated from LNG, which has low  $CO_2$  emissions.

Equity ownership in renewable energy output (GW)



We are developing renewable energy in Japan and overseas with a focus on offshore wind power generation, which leverages our strength of large-scale development.

### Number of employees (consolidated)

As of March 31, 2021



We respect the diversity and individuality of every one of our employees and are engaged in the fostering of an open and fair corporate culture, as well as the creation of an environment in which all employees can feel comfortable working.

#### Number of women management personnel/ percentage of management positions held by women (%)



Based on the principle of leveraging diverse values and thoroughly implementing the concept of fairness, we proactively provide opportunities for women employees to exhibit their skills.

## Non-financial

FY2020 Thermal power generation efficiency benchmarks, the Energy Conservation Act



Both benchmarks A and B meet the standards to achieve. A: A benchmark for the degree of achievement of power generation

efficiency targets by fuel type. B: A benchmark for the overall power generation efficiency for thermal power generation.

## FY2020 number of outside directors

As of April 1, 2021



In addition to executive directors who work for JERA and directors who were originally shareholders, we hire directors who neither work for JERA nor are shareholders to ensure diversity of knowledge, experience, and other factors among the Board of Directors.

## FY2020 CO<sub>2</sub> emissions (Scope 1) (million t-CO<sub>2</sub>/ CO<sub>2</sub> emission intensity in Japan (kg-CO<sub>2</sub>/kWh)



JERA has established an environmental target for FY2030 ("JERA Environmental target 2030 for its Business in Japan") of achieving a 20% reduction in CO<sub>2</sub> emission intensity for all thermal power generation in Japan based on the Japanese government's outlook for 2030.

### FY2021 Board of Directors diversity As of April 1, 2021



Believing that ensuring the diversity of our Board of Directors leads to better business decision-making, we have appointed a woman and foreign nationals as directors.

Strategies

Foundation for Value

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# JERA Zero CO<sub>2</sub> Emissions 2050: The challenge of achieving zero CO<sub>2</sub> emissions from domestic and overseas operations

**JERA's mission is to provide cutting edge solutions to the world's energy issues.** 

# JERA Zero CO<sub>2</sub> Emissions 2050

**To** contribute to the realization of a sustainable society, JERA will take on the challenge of achieving, by 2050, virtually zero CO<sub>2</sub> emissions from JERA's operations in Japan and overseas.\*

\*JERA Zero CO<sub>2</sub> Emissions 2050 is premised on the continual development of decarbonization technology, economic rationality, and consistency with government policy. JERA is continuing to develop decarbonization technology by ourselves, and is taking the initiative to ensure economic rationality.

# **Three** Approaches of JERA Zero CO<sub>2</sub> Emissions 2050

# Complementarity between Renewable Energy and Zero CO<sub>2</sub> Emission Thermal Power Generation

JERA will achieve "JERA Zero  $CO_2$  emissions 2050" through a combination of renewable energy and zero  $CO_2$  emission thermal power generation. The introduction of renewable energy is supported by thermal power generation capable of generating electricity regardless of natural conditions. JERA will promote the introduction of greener fuels and pursue zero  $CO_2$  emission thermal power that does not emit  $CO_2$  during power generation.

# Establishment of Roadmaps Suitable for Each Country and Region

"JERA Zero  $CO_2$  emissions 2050" will be achieved by establishing roadmaps that show optimal solutions for each country and region. Since the energy situation is different for each country and region such as the presence of regional transmission lines or pipelines and the types of renewable energy that could be adopted—JERA will work with stakeholders on a country and regional basis to establish roadmaps. We will develop a roadmap for our business in Japan and will extend this approach to other countries and regions.

3	

# Adoption of "Smart Transition"

"JERA Zero  $CO_2$  emissions 2050" will be achieved through a combination of technologies that are available and reliable at the time adoption decisions are made, lowering technical risk and smoothing the transition to a green society.

# Leading the Decarbonization Effort in the Energy Industry

As a global company that solves energy issues not only in Japan but also around the world, JERA considers global warming countermeasures to be the highest-priority management issue. In October 2020, we announced "JERA Zero  $CO_2$  Emissions 2050" in order to further accelerate the initiatives we had engaged in so far and, at the same time, clarify our long-term vision for JERA. JERA Zero  $CO_2$  Emissions 2050 challenges us to achieve virtually zero  $CO_2$  emissions from our domestic and international businesses by 2050, and we are taking three approaches toward achieving this goal.

The first step is to develop "JERA Zero  $CO_2$  Emissions 2050: Roadmap for its Business in Japan" to illustrate the path toward zero  $CO_2$  emissions in domestic business, and we have established "JERA Environmental Target 2030" to serve as environmental targets to achieve by 2030 toward that end. JERA Zero  $CO_2$  Emissions 2050 was formulated with an emphasis on maintaining a stable supply of energy while promoting decarbonization swiftly and at low cost. Thus, we have received a lot of positive feedback from our stakeholders around the world.

In order to ensure this drive becomes more than just words, we are leveraging the strengths of the value chain from the fuel upstream to power generation and are proactively moving forward with specific initiatives in Japan and overseas, including strengthening partnerships and developing technologies for realizing zero CO<sub>2</sub> emission thermal power. The realization of a decarbonized society is a challenge shared by all humanity and is not something JERA can achieve on its own. JERA will continue working with affiliated organizations/groups and shareholders who share this goal, proposing new ways to supply energy and leading the effort toward decarbonization in the energy industry.



Corporate Vice President, Managing Executive Officer, Director, Chief Operating Officer, Corporate Strategy Department **Hisahide Okuda** 

Strategies

Foundation for Value Creation: ESG

## **Roadmap for its Business in Japan** JERA Zero CO<sub>2</sub> Emissions 2050

ву 2030	ву 2040	ву 2050
Period of moving into action toward achieving zero CO <sub>2</sub> emissions	Period of taking on the challenge o	f achieving zero $CO_2$ emissions
Achieve a 20% reduction of CO <sub>2</sub> emission intensity from all thermal power generation in Japan based on the Japanese government's Long-Term	By 2030 Shut down/decommission completion Shut down/decommission all inefficient JERA coal- fired thermal power plants (supercritical or less)	Achieve virtually zero CO <sub>2</sub> emissions from JERA businesses
Demonstration experiments Conduct proving tests at an actual coal power plant (Hekinan Thermal Power Station) Launch full-scale operation Finalize details in light of results of the demonstration	Achieve a 20% ammonia co-firing rate at the co	firing specialized combustion
Demonstration experiments Verification of stable operation using actual generator at a power plant Resolving technical issues (selection of hydrogen carriers) Selection of the technically and economically optimal hydrogen carrier from among ammonia, liquefied hydrogen, methylcyclohexane (MCH), etc.	2030s Launch full-scale operation	Increase the co-firing rate
<ul> <li>Promote development focused on offshore wind power</li> <li>Support introduction in the form of storage batteries</li> </ul>		
	Achieve a 20% reduction of CO2 emission intensity from all thermal power generation in Japan based on the Japanese government's Long-Term Energy Supply and Demand Outlook for fiscal 2030       Supply and Demand Outlook for fiscal 2030 <b>Demonstration experiments</b> (Hekinan Thermal Power Station) <b>Launch full-scale operation Demonstration experiments</b> (Hekinan Thermal Power Station)       Finalize details in light of results of the demonstration <b>Demonstration experiments</b> (Hekinan Thermal Power Station) <b>Resolving technical issues</b> (selection of hydrogen carriers) <b>Demonstration experiments</b> generator at a power plant generator at a power plant <b>Resolving technical issues</b> (selection of the technically and economically optimal hydrogen carrier from among ammonia, liquefied hydrogen, methylcyclohexane (MCH), etc.         • Promote development focused on offshore wind power	Achieve a 20% reduction of CO2 emission intensity from all thermal power generation in Japan based on the Japanese government's Long-Term Energy Supply and Demand Outlook for fiscal 2030       Supplement Supplemen

\*We are also considering the use of CO2-free LNG.

JERA

**Environmental** 

Target 2030 for its

**Business in Japan** 

exclusively ammonia-fired as of 2050 will be offset using offset technology or by CO<sub>2</sub>-free LNG

# JERA is actively working to reduce CO<sub>2</sub> emissions. In its domestic operations, JERA will achieve the following by FY2030:

> Shut down/decommission all inefficient (supercritical or less) coal-fired thermal power plants and promote demonstration experiments of mixed combustion with ammonia at high-efficiency (ultra-supercritical) coal-fired thermal power plants.

Promote the development of renewable energy centered on offshore wind power generation projects and work to further improve the efficiency of LNG thermal power generation.

E Reduce CO<sub>2</sub> emission intensity by 20% compared to that of thermal power plants in Japan as a whole, based on the long-term energy supply and demand outlook for FY2030 set by the government.

"JERA Zero CO2 Emissions 2050 Roadmap for its Business in Japan" and "JERA Environmental Target 2030" are premised on the continual progress of decarbonization technology, economic rationality, and consistency with government policy. JERA is continuing to develop decarbonization technology by ourselves, and is taking the initiative to ensure economic rationality.

# **Special Feature** Response to the TCFD Recommendations



### Basic Approach

As a global enterprise that solves energy problems not only in Japan but also around the world, JERA considers climate change measures to be a priority issue and specifies them in its Materiality. For the purpose of appropriately evaluating climate-change-related risks and opportunities and sustainably enhancing corporate value, we have summarized our climate-change-related systems and businesses in general and the efforts represented by the "3 approaches" set forth in "JERA Zero CO<sub>2</sub> Emissions 2050" into 4 elements (governance and risk management, strategy, metrics, and targets) in line with the TCFD<sup>\*1</sup> recommendations. In September 2021, JERA endorsed the TCFD Recommendations and joined the TCFD Consortium<sup>\*2</sup>.

We will continue to promote disclosure based on the TCFD recommendations in the Integrated Report to further enhance communication with stakeholders including investors.

\*1 TCFD (Task Force on Climate-related Financial Disclosures): The task force established by the Financial Stability Board (FSB) in response to the wishes of the G20 Finance Ministers and Central Bank Governors meeting to stabilize the financial system due to climate change. It published a framework and recommendations for disclosure on climate change-related risks and opportunities for companies, etc.



TCFD

\*2 The TCFD Consortium was established as a forum where companies and financial institutions that support the TCFD recommendations work together to promote initiatives and discuss effective corporate disclosure and efforts to link disclosed information to appropriate investment decisions by financial institutions. In order to further enhance corporate disclosure level in line with the TCFD recommendations by companies and to promote constructive dialogue (engagement) between investors and companies, the consortium actively publishes various guidance and holds the TCFD Summit as a forum where companies and financial institutions from around the world gather together.



## **Governance and Risk Management**

### Governance

Important policies, targets, and reviews related to climate change measures are determined by the Board of Directors or the Leadership Panel under the corporate governance system.

Foundation for Value

Creation: ESG

In addition, for the purpose of advancing ESG management, we have established the Sustainability Promotion Committee, which is chaired by the President and under the direct control of the Board of Directors, to oversee sustainability across department throughout the company. The Environmental Subcommittee reports on annual action plans and performance for all environment-related activities, including climate change measures.

Furthermore, Directors exchange opinions with outside experts, sharing the latest information and findings at Leadership Panel or other meetings. In addition, we have hold "Sustainability Seminars" for managers as appropriate. By continuously deepening the knowledge and understanding of trends in ESG management, including climate change, from directors to employees, we will proactively work to further improve our ESG activities.

### Risk Management

In order to gain a proper understanding of and mitigate risks associated with corporate activities, we have established a risk management system with the President as the highest decision maker and conduct Integrated Risk Management that classifies risk into operational risk, market risk, and credit risk. With regard to climate-change-related risks, we identify risks based on the recognition that they may affect these areas. In particular, risks that should be managed by directors are selected as "important risks to be managed by management." The Risk Management Committee, chaired by the president, reviews and deliberates on the management status of these risks and response policies for them and brings those for discussion and reports them to the Board of Directors, both on a regular basis and as needed.





Financial and Corporate

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## Strategy - Setting up analysis targets and scenarios -

Selection of analysis targets We conduct scenario analysis to identify and analyze risk opportunities throughout our business value chain. The analysis covers not only the short-term, but also the medium-term (to 2030) and long-term (to 2050).

Selection of scenarios

The following two scenarios have been established with reference to the information published by the International Energy Agency and the Intergovernmental Panel on Climate Change.

Configuration Scenarios	Scenario for below 2°C	Scenario for 4°C or higher
Assumed business environment	<ul> <li>Bold policies and technological innovations will be implemented to achieve sustainable development by limiting the increase in global average temperature by the end of this century to 1.5 to below 2°C compared to pre-industrial levels.</li> <li>Global power generation increases due to economic growth and electrification. In particular, the amount of electricity generated by renewable energy, particularly solar and wind power, increases significantly.</li> <li>Fossil fuel consumption decreases and demand for green fuels such as hydrogen and ammonia increases. On the other hand, natural gas continues to play an important role as an energy source in Asia and other regions where the increase in energy demand is remarkable.</li> </ul>	<ul> <li>Although national policies (new policies) are implemented, such as Nationally Determined Contributions made in line with the Paris Agreement, the average global temperature by the end of this century will increase by more than 4°C compared to the pre-industrial levels.</li> <li>Increase frequencies and intensities of extreme temperature and precipitation events.</li> <li>Sea level chronically rises. Combined with the occurrence of river flooding due to storm surges and extreme precipitation, the risk of flooding will be increased, especially in coastal cities.</li> </ul>
Reference scenario	<ul> <li>IEA: "Sustainable Development Scenario (SDS)"</li> <li>Working Group I contribution to the Sixth Assessment Report of the IPCC: "SSP1-1.9, SSP1 -2.6"</li> </ul>	<ul> <li>IEA: "Stated Policies Scenario (STEPS)"</li> <li>Working Group I contribution to the Sixth Assessment Report of the IPCC: "SSP3-7.0, SSP5-8.5"</li> </ul>

### Scenario for below 2°C: Possible changes in business environment\*1

Scenario for 4°C or higher: Possible changes in business environment\*2 Global demand for hydrogen and ammonia Natural Gas Demand by Region **Global Power Generation and Electrification Rate** Intensity increase Frequency (Mtoe) (Bcm) (TWh: Power Generation) (%: Electrification Rate) Approx. Approx. 60,000 -600 -1,500 -- 40 Electrification Rate 9.4 times +**5.1**℃ Extreme temperature Asia 500 events\* 1,200 Others 45.000 --30Frequency Intensity increase 400 . Othe 900 Approx. Approx. Renewable 30,000 Energy - 20 300 -2.7 times +30.2%North America Extreme precipitation 600 Middle East events\*3 Wind 200 -15,000 - 10 Europe 300 -100 -Africa +0.63 - 1.01 meters Latin America 0 0 2019 2030 2040 2050 2019 2025 2030 2040 2019 2030 2040 2050 Sea level rise\*4

\*1 Based on IEA "World Energy Outlook 2020" and "Sustainable Development Scenarios (SDS)" in Energy Technology Perspectives 2020.

\*2 Prepared on the basis of the Working Group I contribution to the Sixth Assessment Report of the IPCC. All values are compared with the values assumed before the Industrial Revolution. \*3 Estimated value at 4°C rise. "Extreme" refers to a weather phenomenon that can occur only once in 10 years. \*4 Assumed values for 2100 for the SSP5-8.5 scenario.

# Special Feature Response to the TCFD Recommendations

# TCFD

**Risk Level** 

Financial and Corporate

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# Strategy: Impact assessment on JERA's business

Business opportunities and risks in JERA related to climate change were analyzed based on the scenario set up on the previous page. As a result, it was reconfirmed that various initiatives and measures such as our "JERA Zero CO<sub>2</sub> Emissions 2050" contribute to business opportunities as well as business risk reduction.

	Category Changes in the business environment			Assessing the impact (risk/opportunity) on JERA	Present	2030	2050	JERA's response to changes		
	Policy and Legal	Introduction of carbon pricing     Introductions on carbon emissions		<ul> <li>Increased operating costs</li> <li>Operating limits for owned power supplies</li> </ul>				Steady promotion of "JERA Zero CO <sub>2</sub> Emissions 2050"		
		fuel use	<ul> <li>Tightening energy conservation regulations</li> </ul>	Increasing needs for energy transport and consumption efficiency				We will steadily implement measures based on the roadmap on p.16, focusing on "Zero $CO_2$ emission		
	Technology	Changes in energy supply structure through the	Reduced cost of technology     development and green fuel	<ul> <li>Expanding opportunities to develop and introduce hydrogen and ammonia fuels</li> </ul>				thermal power generation" and "renewable energy." Strengthening the LNG Value Chain We will maintain and expand the scale of LNG		
Sce		development and introduction of non-fossil energy	Reduction of renewable energy and storage battery technology costs	<ul> <li>Reduced utilization rate of owned power supplies</li> </ul>				procurement through replacing domestic power generation to more efficient power generation		
nario 1		technologies	Grid distribution	<ul> <li>Expanding business opportunities with renewable energy and storage batteries</li> </ul>				and expanding overseas power generation. We will also aim to increase profitability throughout the		
Scenario for below 2°C	Market and	Expansion of the electricity market	Increased electricity demand due to     economic growth and electrification	<ul> <li>Expanding power supply opportunities</li> <li>Increased importance of natural gas as bridging energy</li> </ul>				value chain by connecting this scale to the expansion of trading and participation in upstream businesses.		
v 2°C	Service		Improving customer needs for green products and services	Expanding business opportunities with green power and fuel				Actively disseminate information to		
	Rill	Growing global awareness of climate change		<ul> <li>Financial constraints resulting from curbing or withdrawing investment in the fossil fuel business</li> </ul>				stakeholders We will provide stakeholders, including electricity		
			Investor divestment and engagement	• Expanding opportunities to utilize transition green finance				users and investors, with appropriate information on our company's measures toward zero CO <sub>2</sub> emissions,		
	Reputation		Acceleration of global warming countermeasures and direct	Damage to reputation due to slow or delayed efforts				thereby expanding green power and diversifying financing.		
	P B C C C		connection of corporate evaluation	<ul> <li>Achieving ambitious goals to improve reputation</li> </ul>						
Scenar	Acute	Increased acute risk	Frequent and severe natural disasters	<ul> <li>Increased disaster response costs</li> <li>Increased equipment damage and recovery costs</li> <li>Changes in renewable energy power generation</li> </ul>				Improving disaster resilience In preparation for the occurrence of natural disaster risks,		
io fo	Scenario for 4°C or			Increasing need for stable energy supply				including acute and chronic risks, we are developing		
			Sea level and tsunami height rise	Increased disaster response costs				emergency disaster response rules and manuals, conducting regular disaster drills, and upgrading the JERA version of the BCP and BCM. We will also diversify our sources of power and fuel to enhance our resilience		
or higher	Rue	Increased chronic risk	Changes in climate patterns, such as sustained high temperatures	<ul> <li>Decreased power generation efficiency</li> <li>Electric demand fluctuations</li> </ul>				against disasters.		

## Special Feature Response to the TCFD Recommendations

## Efforts to Achieve Zero Emissions in JERA's Value Chain

JERA is participating in business throughout the fuel value chain from the upstream development, transportation, and storage of fuel to the power generation and sale of electricity. We are working with many countries and companies around the world to achieve zero emissions at each stage.

## JERA's Value Chain



- Consideration of offshore wind power development in Hokkaido, Aomori, and Akita prefectures
- Start of demonstration of energy storage system data platform
- Gunfleet Sands offshore wind farm in the United Kingdom and Formosa 1~3 offshore wind farm in Taiwan
   Investment in Zenobē Energy Limited, a UK storage cell operator
- Development of onshore wind power and solar power generation in North America
- Investment in ReNew Power Limited, a renewable energy power generation company in India

# TCFD

## **Metrics and Targets**

We have positioned "JERA Zero  $CO_2$  Emissions 2050" as a long-term goal and have established a roadmap for achieving this goal as well as an interim target for  $CO_2$  emissions in 2030. In addition, we are continuously calculating and evaluating actual results to manage progress every year.





# **Business Environment Awareness and Response**

# Reorganizing Our Business Model to Respond Properly to Changes in the Domestic and Global Environments

We have organized into three profit centers—Business Development, Optimization and O&M Engineering, which draw profits from returns on investments, market transactions and O&M engineering business, respectively—with the aim of expanding profits by turning changes into business opportunities by securing and strengthening excellent skills for responding to environmental changes for each function.

Present	Changes in the business environmer	nt	Response to changes		Roles of each department		Skills to acquire	
Business Development function Worldwide power generation assets: 80 GW Knowledge of LNG carriers and fuel upstream business	<ul> <li>Increased demand for energy in Asia</li> <li>Exit from coal/ gas shift</li> <li>Innovations in energy technology</li> </ul>	>	Expand value chain business in each country High-efficiency gas thermal power construction Large-scale renewable energy, hydrogen and ammonia business development	>	Provide solutions based on our assets and each country's needs with the aim of achieving an optimal asset portfolio and expanding income	>	<ul> <li>Capacity to form new projects in each country (Example: Gas- to-power /renewables)</li> <li>Asset portfolio optimization</li> <li>Establishment of a hydrogen and ammonia value chain</li> </ul>	
<b>Optimization function</b> A trader that is one of the world's largest fuel purchasers, and one of Japan's largest power producers	<ul> <li>Increased competition in electricity and gas sales</li> <li>Market creation, introduction of systems</li> <li>Appearance of completely new risks</li> </ul>	>	Enhance thermal power generation and fuel utilization capacity Leverage global market trading Find new customers	>	Optimize the entire value chain from fuel procurement to power and gas sales with the aim of expanding opportunities for profit and maximizing spreads.	>	<ul> <li>Market intelligence</li> <li>Risk control capacity</li> </ul>	
O&M Engineering function Provider of O&M engineering services of 70 GW in Japan	<ul> <li>Expansion of digitalization</li> <li>Increased grid instability (expansion of renewable energy)</li> <li>Steps toward zero CO<sub>2</sub> emission thermal power</li> </ul>	>	Remote monitoring and predictive management Improve agility in response to variance Internalize decarbonization technology	>	Implement flexible operations and reduce costs in facility operation and maintenance with the aim of achieving high added value in 0&M engineering services and expanding profits.	>	<ul> <li>The capability to transform operations by utilizing digital technology</li> <li>Engineering capabilities leveraging facility user expertise</li> </ul>	



Photo by Ørsted

# **Business Strategies**

# Execution of Six Measures to Achieve Our "Mission and Vision"

We are systematically executing six measures to achieve our "Mission and Vision." We will maintain and expand the scale of LNG procurement through streamlining and replacement in domestic power generation, and through expansion in overseas power generation. Additionally, we aim to connect the procurement scale to trading expansion and upstream business participation in an effort to improve the profitability of entire value chains.

We intend to grow renewable energy as a main pillar of our future business portfolio by using our large-scale business development capacity cultivated through existing business to promote development in offshore wind power and other areas.

			Six Measures	2025 Targets*	
Business Development Department Excellence of LNG	S	G	Flexible supply sources (LNG securement)	Develop domestic replacement: 7-9 GW (5 to 7 sites)	*Targets in the business plan published in April 2019
value chains and large- scale renewable energy development	Strengthening through rep	das-to-powe	Large-scale renewable energy (offshore wind power)	<ul> <li>Win Gas to Power projects</li> <li>LNG carriers: Approximately 25</li> <li>Equity ownership in renewable energy output: 5 GW</li> </ul>	Consolidated net income:
Optimization Department Resource and electricity trading and market creation	of domestic power lacements (LNG th	er (LNG commercial f	Expansion of trading business scope and opportunities	<ul> <li>LNG transaction volume: Approximately 35 million tons</li> <li>Optimization through the effective use of LNG carriers</li> <li>Profits from trading</li> </ul>	200 billion yen Credit rating:
O&M Engineering Department World-class agility and operation efficiency	supply portfolio ermal power)	flow expansion)	Introducing JERA O&M Way to all JERA thermal power plants to achieve mobility and agility and improve operational efficiency	<ul> <li>Power plant operation and maintenance: Equivalent to 80 GW worldwide</li> <li>20% reduction of 0&amp;M engineering expenditures (compared to pre-consolidation figures of TEPCO/Chubu Electric Power)</li> <li>50% reduction of periodic inspection duration</li> <li>Organization and management that promotes achievement of One Global JERA</li> </ul>	A-grade or higher



# **Establishing a Robust Management Base to Support Business Strategies**

Our systematic execution of the six measures to achieve our "Mission and Vision" depends on the underlying organizational structure that supports business strategies toward those ends. We are aiming to increase the efficiency of our business overall and enhance our corporate value on the strength of our Corporate Strategy, Finance and Accounting and Business Support & Solutions Departments, which support the activities of our three profit centers in addition to underpinning centralized, optimal management of entire supply chains.



\*D&I: Diversity and Inclusion (accepting and making the best use of diverse human resources)



# **Digital Transformation (DX)**

# Becoming a Data-Driven Company through DX that Realizes JERA's Growth Strategy

JERA aims to be a Japan-based global energy company. Having inherited the human resources and systems of Tokyo Electric Power and Chubu Electric Power, we are in the process of blazing a new trail with our innovative approach.

ICT departments are the organization in charge of our entire growth strategy-based DX, from strategies to implementation, and we are promoting a transformation that incorporates cuttingedge technologies.

The core of our transformation is our human resources. In addition to developing human resources, under the slogan "We Decide, We Control, We Create" and placing importance on the diversity of

every one of our employees as well as their ability to make independent decisions and take action, we are working as One Team to create a new business platform through DX.

Senior Managing Executive Officer Global CIDO (Global Chief Information and Digital Officer)

Sami Ben Jamaa



# DX Roadmap

In order to achieve our aim and become a Data-Driven Company that makes decisions swiftly and accurately on the basis of data, we have launched an IT and Digital Transformation Project as a companywide initiative to promote more efficient and sophisticated operations as well as new value creation through DX in each of our business divisions.



## **Complete Cloud Transition Initiative**

In order to provide a system environment that responds swiftly and flexibly to sudden changes in the business environment, we have consolidated our legacy and modern systems to become the first energy company in Japan to achieve the migration of all core systems to the cloud. Currently, we are moving forward

with DX by combining the latest technologies such as Al and the loT, in addition to promoting initiatives for business continuity planning (BCP) and working toward multi-cloud computing.



# Securing and Developing Digital Human Resources

We are promoting the diversification of our human resources by proactively securing excellent human resources from outside the company who possess advanced knowledge of ICT, regardless of age, gender, or nationality, and we currently employ staff from more than 10 different countries. ICT departments promote education on digital trends, technologies, work on publishing newsletters, and hold seminars to improve the digital literacy of all employees.



Strategies

# **Business Development Department**

We are developing and operating projects in Japan as well as Asia, North America, and Australia. As one of the world's largest powergeneration and fuel business companies, in addition to developing cutting-edge, high-efficiency thermal power sources, we are engaged in the LNG procurement, upstream, and transportation businesses. We are also moving forward with the development of renewable energy, the establishment of a hydrogen and ammonia fuel value chain, and the transition to zero CO<sub>2</sub> emissions thermal power generation. Going forward, we will continue to accelerate our business globally in line with each country's needs through the active involvement of diverse human resources and alliances and collaboration with partners in Japan and around the world.

# A Group of Investment Professionals Aiming to Create an Optimal Asset Portfolio by Providing Energy Solutions

Our mission is to optimize the asset portfolios of existing and new businesses by providing energy solutions. As a professional of global asset management that develops and manages optimal assets, we are developing businesses that meet the needs of various countries. In addition to our LNG value chain business from upstream to power generation, we are also engaged in initiatives to develop a hydrogen and ammonia business and a renewable energy business for realizing a further decarbonized society.

LNG thermal power and zero  $CO_2$  emissions thermal power are complementary to renewable energy with unstable power output. Through a combination of thermal power sources and renewable energy and solutions by our global value chain, we will contribute to regional decarbonization and economic growth.



Corporate Vice President, Managing Executive Officer, Director, Chief Operating Officer, Business Development Department

 One of the world's largest LNG transaction volumes
 Widespread value chain from fuel upstream to power generation

Strengths

- Trustworthiness as the world's chosen partner for large-scale business development
- Global trend toward decarbonization
- Increased demand for energy in Asia
  Expansion of renewable energy and gas-fired

**Opportunities** 

- power generation
- Technological progress toward the realization of zero- CO<sub>2</sub> emission thermal power generation

Initiatives

**Financial and Corporate** 

Information

- Expansion of integrated projects from fuel procurement to power generation (gas-to-power)
- Replacement with the most efficient power plants
- Proactive development of renewable energy and hydrogen and ammonia businesses

## **Domestic Power Generation Business**

In an effort to both enhance our domestic competitiveness and reduce environmental impact, we are replacing our existing thermal power plants with the most efficient models while making use of their



infrastructure and are adopting cutting-edge exhaust gas treatment equipment. In addition, we consider the introduction of hydrogen and ammonia fuels, which do not emit CO<sub>2</sub> during combustion. We are also working to realize a composition of power sources consistent with energy and environmental policies in order to achieve a balance between the stability and sustainability of our energy supply.

## **Renewable Energy Business**

We aim to be the No. 1 company in Asia for offshore wind power generation, which is a field expected to see massive growth in the future, and are currently involved in multiple projects in Taiwan. We are strengthening both our organization and personnel and will also



Photo by Ørsted

be developing domestic offshore wind-power generation projects, as well as floating offshore wind-power generation, going forward. Further, we are proactively developing solar and onshore wind power in places such as North America and India and will additionally be working on a battery storage business that will contribute to stabilizing the balance between supply and demand.

## **Overseas Power Generation and Gas-to-Power Business**

We possess about 30 projects in more than 10 countries around the world and are developing businesses with the experience we have cultivated through our projects. We are aiming to expand development



based on strategies to meet the needs of markets in North America, Asia, and the Middle East. We are also focusing on a new business area, namely, discovering gas-to-power projects, which we consider a key to our future growth.

# LNG and Next-Generation Fuel Value Chain Business

Our annual LNG transaction volume totals approximately 40 million tons, and we participate in businesses throughout the entire value chain, from upstream development to transportation, trading, and power generation. Through our expertise



that we have cultivated with LNG as well as one of the greatest offtake capabilities in the world, we will also establish a hydrogen and ammonia value chain to realize zero  $CO_2$  emission thermal power and, at the same time, aim to supply other industries and develop our global businesses.

#### FY2020 Main achievements/accomplishments

Commencement of commercial operation of thermal power plants Overseas: **1.1** GW Japan: **0.65** GW Thermal power plants loan agreements concluded Overseas: **0.745** GW Domestic offshore wind power at the early stage environmental impact statement inspections started 2 cases Collaboration agreements in decarbonization and Gas-to-Power fields 3 cases

Foundation for Value

Creation: ESG

# **Providing Value**

#### ■ Achieving Zero CO<sub>2</sub> Emission Thermal Power Generation

## Initiatives to establish Hydrogen and Ammonia Value Chain

Having established "JERA Zero  $CO_2$  Emissions 2050," we are moving forward with the introduction of cleaner fuels for thermal power generation and are pursuing zero  $CO_2$  emission thermal power, which does not emit  $CO_2$  during power generation.

Backed by our LNG value chain from upstream and procurement to power generation, our favorable and long-standing relationships with leading companies around the world, and our overwhelming fuel transaction volumes, we will establish a value chain for hydrogen and ammonia, which are fuels for realizing decarbonization. We are engaged in studies aiming for this value chain with numerous countries and enterprises across the world such as collaborations with PETRONAS, Yara International ASA, the world's largest nitrogen-based fertilizer manufacturer, and the commercialization of clean ammonia production in the United Arab Emirates. Through these initiatives, we are contributing to the stable supply of energy as well as the shift toward a decarbonized society, not only in Japan but also internationally.



#### Development of Renewable Energy

## Development of Renewable Energy in Locations Around the World

We have set a goal for our renewable energy business of developing 5 GW energy output by FY2025, and we are moving forward with projects in locations around the world. As part of our offshore wind power business, we are simultaneously involved in projects at different stages of early development, construction, and operation in Taiwan, whose natural conditions closely resemble those of Japan. We are strengthening our human resources, both from within and outside JERA, and, leveraging the expertise gained in Taiwan, will develop projects together with trusted partners in Japan. We are also moving toward participation in projects of floating offshore wind power.

Regarding onshore wind power and solar power generation, we are engaging in development from the early stages with a dedicated team in North America of mas.sive market, in addition to investing in ReNew Power, a major power company in India. Going forward, we will also accelerate joint development with local companies in various Asian countries. Further, we will promote a new business model through solutions combining solar and wind power with storage batteries.



Formosa I Offshore Wind Power Generation Project

#### Stable Supply of Energy and Reducing Environmental Impact

## Moving Ahead with Domestic Thermal Power Plant Replacement Plans

We are steadily moving ahead with plans to replace aging thermal power generation facilities in Japan with state-of-the-art, highly efficient facilities for the realization of a stable energy supply and a low-carbon society. Additionally, these thermal power generation facilities can supplement the load variation of renewable energy and function as a bridge to a decarbonized society.

As a notable example, we are proceeding with replacement of the Goi Thermal Power Station and Anegasaki Thermal Power Station in Chiba Prefecture. By utilizing cutting-edge technology to realize thermal efficiencies among the highest in the world, we are developing power plants that not only supply inexpensive electricity but also have a low environmental impact (do not emit large amounts of CO<sub>2</sub>).



Image of the Goi Thermal Power Station

Value Creation

Creation: ESG

# **Optimization** Department

JERA handles the largest LNG transaction volumes in the world and has ten years of experience in fuel trading. We ensure comprehensive optimization of the huge value chain from fuel procurement to transport, receiving, power generation, and sales while utilizing trading to achieve the most cost-efficient, flexible operation. In the sale of electricity and gas in Japan, we contribute to the provision of energy solutions that meet customers' needs and the development of the energy market by utilizing short- and long-term bilateral transactions and trading markets.

# **Pursuing Optimal Operation of Energy Value Chains**

JERA continues to contribute to sustainably growing society in which prosperous lifestyles are attainable. To achieve this goal, the Optimization Department, which is in charge of operating the entire energy value chain, will combine individual business segments and implement proper risk management in order to pursue optimal operations and to create new services for our customers.

Amid sweeping changes in the business environment, we contribute to the development of the global energy market and establishment of a sustainable society by flexibly responding to fluctuations in energy demand and markets, optimizing operations, and utilizing the trading network of JERA Global Markets Pte. Ltd. (JERAGM).



Managing Executive Officer, Chief Operating Officer, Optimization Department Sunao Nakamura

Strengths	<b>Opportunities</b>	$\geq$	Initiatives
<ul> <li>Competitive, flexible procurement portfolio</li> </ul>	<ul> <li>Increase competition in electricity and gas sales</li> </ul>		<ul> <li>Response to variation in demand through optimization of entire value chains</li> </ul>
<ul> <li>A wealth of market intelligence, mainly from JERAGM</li> </ul>	<ul> <li>Market creation, introduction of systems</li> </ul>		<ul> <li>Risk control through optimal management of our fuel portfolio in response to market trends</li> </ul>
<ul> <li>Expertise in dealings in the electricity and gas markets</li> </ul>	<ul> <li>Variation in resource prices</li> <li>Variation in domestic electricity demand</li> </ul>		<ul> <li>Pursuit of new service for new electric power companies while limiting the amount and risk</li> </ul>

Securing consistent profits through sales to retailers of the Tokyo Electric Power Company and the Chubu Electric Power Company

# Short-Term Fuel Procurement **Business**

Terminals and power plants capable of

flexible operations and receiving

JERA has the world's largest procurement scales and established an outstanding fuel portfolio with short-term (within four years for LNG) price competitiveness and responsiveness to the risks associated with volume and price fluctuations. We intend to contribute to the economical supply of electricity and gas in Japan on the basis of our strong fuel procurement and expand our fuel trading business on the strength of our acquired flexibility.



# **Fuel Trading Business**

In April 2019, we expanded the scope of our optimization and trading from coal to include LNG. With approximately 300 people mainly at JERAGM, which has offices worldwide including in Singapore and London, we are contributing to the optimization of entire supply chains through asset-backed trading that leverages our world-class fuel procurement scale.



We meet the diverse needs of our customers and provide a stable supply of electricity and gas by our supply capabilities backed by largescale fuel contracts as well as our operational experience and achievements. In addition, by supplying as much electricity as possible to the wholesale electricity market, we contribute to stable power supply and demand in Japan. Further, by entering new markets such as the capacity market and supply-demand adjustment market, we are playing a part in the development of Japan's electricity markets.



		Contents / Editorial Policy 💙	Value Creation	Strategies	Creation: ESG	Information
FY2020 Main achievements/accomplish	iments					
LNG transaction volume	Electrical energy sold	LNG procurement from				
Approximately <b>40</b> million t	246.6 billion kWh	<b>13</b> countries				

# **Providing Value**

### Capacity of Stable Supply

# Contributing to stable Power Supply and Demand through Optimal Operation

Our Optimization Department minimizes the impact of expanding fluctuations in power demand due to recent uncertainties by optimizing our entire value chain, including the optimal operation of thermal power generation and fuels, and leveraging our trading network through JERAGM.

We contributed to the stabilization of Japan's electricity supply and demand during the nationwide power supply-demand strain in the winter of FY2020 through optimizing inventory and implementing additional procurements about 3 million tons of LNG, a previously unprecedented amount, through spot trades starting in October 2020 and received from November 2020 to February 2021 in order to increase supply capacity as much as possible.



### LNG Fuel Supply Business/Reducing Environmental Impact

### **Start of LNG Bunkering Business**

JERA has started an LNG bunkering business in the Chubu region of Japan through Central LNG Shipping Japan Corporation and Central LNG Marine Fuel Japan Corporation, two entities of a joint venture with Kawasaki Kisen Kaisha, Ltd., Toyota Tsusho Corporation, and Nippon Yusen Kabushiki Kaisha.

In response to the global trend of tightening environmental regulations, the International Maritime Organization (IMO) has established the goal of reducing greenhouse gas (GHG)emissions from international shipping by half by 2050, compared to 2008, and many LNG-fueled ships are expected to be built going forward. The joint venture was established in May 2018. Work continued toward the start of operations, and on October 20, 2020, venture-owned LNG bunkering vessel "Kaguya" supplied the first ship-to-ship LNG fuel in Japan.

JERA will continue to drive the conversion of ships to LNG fuel and reduce the impact on the environment through the LNG bunkering business with this joint venture.



### Portfolio Optimization Function Leveraging Global Markets

### **Fuel Trading via JERA Global Markets**

Together with joint venture partner EDF Trading Limited, we engage in the fuel trading business via subsidiary company JERA Global Markets Pte. Ltd. With an asset-backed trading model, leveraging a large commercial stream of fuel supplies for JERA and EDF combined with thirdparty transactions, we have engaged in optimal trading in LNG and coal markets



and their respective transportation markets with a solid track record. In addition to its head office in Singapore, JERA Global Markets has offices in London, Amsterdam, Tokyo, and Baltimore, USA. Making full use of flexible fuel contracts, controlled fleets, access to European LNG terminals and pipeline gas markets, financial market expertise, and supporting IT infrastructure, JERA Global Markets strives to optimize transactions globally.

### LNG and Coal Trading structure since April 2019



Foundation for Value

Creation: ESG

# **O&M Engineering** Department

JERA has inherited a 70-year track record in stable electricity supplies in the Kanto and Chubu regions, the eastern and central areas of Japan, and possesses expertise in O&M (operation and maintenance) and engineering (development and construction) gained through the ownership and operation of approximately 80 million kW of power plants in Japan and overseas. We also coexist with local communities through efforts such as taking responsibility for projects over long periods of time, from power plant design, procurement, and construction to maintenance and operation. We offer world-class O&M Engineering services by combining the expertise gained through business experience with the world's leading technologies to ensure safe, competitive, and agile operation of power plants and receiving terminals for customers in and outside Japan.

# **Promoting the JERA O&M Way** toward being a world-class player in O&M

Our O&M Engineering Department, a group comprising more than 3,000 engineers, has continuously delivered electricity through many years of O&M experience in power plants and fuel terminals. We also continue to coexist with local communities and support comfortable lifestyles and the manufacturing industry in those communities. Going forward, we will combine "Kaizen" (constant improvement) and the technical capabilities that we have cultivated through our experience with digitalization to establish and refine the "JERA O&M Way," which balances cost competitiveness and market responsiveness and provides an unprecedented, outstanding level of O&M services compared with competitors inside and outside Japan. Further, by promoting digital power plants, we will also seek to transform operations and pursue zero CO<sub>2</sub> emission thermal power generation in order to realize a decarbonized society. We contribute to the enhancement of customer value through the deployment of the "JERA O&M Way" aiming to be one of the world's top O&M players.

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Senior Managing Executive Officer Chief Operating Officer, 0&M Engineering Department Tetsuya Watabe

Strengths	>	Opportunities	>	Initiatives
<ul> <li>Group of more than 3,000 skilled engineers</li> </ul>		<ul> <li>Electricity market competition</li> <li>Digitalization</li> </ul>		<ul> <li>0&amp;M with world-class competitiveness</li> <li>Worldwide deployment of the JERA 0&amp;M Way</li> </ul>
<ul> <li>Opportunities and experience operating</li> </ul>		<ul> <li>Expansion of renewable energy</li> </ul>		Decarbonization initiatives
an abundant power supply portfolio		<ul> <li>Development of zero CO<sub>2</sub> emission thermal power generation capabilities</li> </ul>		<ul> <li>(coal-ammonia co-firing, 0&amp;M in offshore wind power)</li> <li>Digital Power Plants promotion</li> </ul>

## **Engineering Work**

Through the varied expertise we have gained from designing diverse, large-scale power plants, we seek to optimize plant design, "JERA best practices," and realize both ensuring facility reliability and reducing construction costs.



## **Procurement Work**

We are reducing the costs in the procurement of a great variety of equipment and materials through market research, cost analysis, adjustment of order methods and the utilization of third-party products and services. We are also working to reform work processes based on global best practices.



## **Operation Work**

In the operation of our power generation facilities and LNG terminals, we realized power plant operation that is flexible and agile, including increasing availability and expanding fuel types through our experience of continuous stable power supply. In addition, we are also working on remote supervision and predictive management by using IoT.



## **Maintenance Services**

Through O&M and engineering experience and capabilities cultivated via our track record, we achieve both cost reductions and sustaining of facility reliability, even in the operation of facilities beyond their designed service life. In addition, we also contribute to the improvement of market responsiveness and the

reduction of operating costs by reducing the time required for periodic inspections through onsite "Kaizen" (constant improvement).



### Number of maintenance facilities in FY2020



Power generation capacity in Japan

**27** plants

**bases** (excluding jointly operated terminals)

**70** million kW

# **Providing Value**

### Realizing Cost Competitiveness/Market Responsiveness

## Deployment of the "JERA O&M Way"

The "JERA O&M Way," which combines our "Kaizen" skills and technological capabilities with digitalization, has been cultivated via our operation of power plants in Japan and around the world. Through our O&M and engineering services, we realize both cost competitiveness and market responsiveness and, at the same time, continue to deepen (sophistication of our technology) and evolve (expanding our services), in turn further enhancing our position against competitors.

In addition, by applying our expertise that we have accumulated through these activities not only at our power plants but also in the operation of a variety of customer plants, we are aiming to be a world-class player in O&M services.

### Advancing Our O&M and Engineering through DX

### **Promoting Digital Power Plants**

JERA has long been working on remote monitoring and predictive management utilizing IoT. Seeking to further enhance our O&M and engineering, we are promoting a Digital Power Plant Project to gather and store all data regarding power plant facilities and workers via a shared platform, evaluate and analyze this data using AI, and transform work processes. In addition, through this project, we are working to connect electricity and fuel markets through data in real time in order to maximize not only the life cycle value of power plants but also the entire value chain, from fuel to power sales.

### Pursuing Zero CO<sub>2</sub> Emission Thermal Power

## **Utilizing Ammonia as a Fuel**

Ammonia makes it possible to transport and store hydrogen efficiently and at low cost. In addition to an energy carrier, ammonia can be used as a fuel for thermal power generation. Ammonia is expected to have a great advantage in reducing the emission of greenhouse gases because it doesn't emit CO<sub>2</sub> during combustion.

This initiative will generate electricity by co-firing coal and ammonia using Unit 4 at the Hekinan Thermal Power Station (power output: 1 GW) and evaluate boiler heat-absorption characteristics as well as environmental load characteristics such as exhaust gases. Further, AI will be utilized to optimize boiler operation to fully realize ammonia co-firing technology.



Yokohama Thermal Power Station





Hekinan Thermal Power Station

# **Foundation for Value Creation**

The JERA Group works as one to resolve social issues and enhance corporate value.



Information

# **JERA's ESG**

### JERA Business and ESG Management

As a global company, JERA has established as its "Mission" the provision of cutting-edge solutions to the world's energy issues. We seek to advance ESG management throughout the entire value chain based on fully grasping and managing of the impact of our business activities on society and the environment as well as the effects of changes in the business environment on our business.



### Sustainability Management System

In May 2019, we established the Sustainability Promotion Committee to oversee sustainability across departments throughout the company. The committee is under the direct control of the Board of Directors and is chaired by the company president.

Foundation for Value

Creation: ESG

Under the Sustainability Promotion Committee, four subcommittees investigate issues and promote measures in four areas: the "environment"; "society and human rights"; "governance"; and "public and investor relations" in terms of ESG. All departments have been involved in making progress in the consideration of matters relating to sustainability through the activities.

We continue to promote sustainable activities that are integrated with our business activities and move forward with initiatives aiming to develop business and resolve social issues in addition to contributing to the achievement of SDGs.



(as of August 31, 2021)



#### Actual number of Sustainability Promotion Committee held in FY2020

In FY2020, the Sustainability Promotion Committee was held twice. In the first meeting, the committee discussed the activities of its subcommittees in the previous fiscal year as well as directions for activities for the current fiscal year.

In the second meeting, the committee discussed JERA's Materialities and the content of "the Corporate Communication Book 2020," publicly announcing the Materialities after identifying and approving them.



# **JERA's Priority Issues (Materialities)**

In order to sustain growth while adapting flexibly to changes in the business environment amid the increasing uncertainty of the modern world, it is important to fully understand and manage the impact of the external environment on us and the effects of our business activities on stakeholders and society. We have identified priority issues that we need to address - which we call "Materialities" - for resolving society's issues and enhancing our corporate value over the medium and long term.

#### **Process of Identifying Materialities** Mission Vision (See "Corporate Communication Book 2020" p. 12-13 for 1619 To provide cutting edge solutions to more information.) Global leader in LNG and renewables, the world's energy issues sparking the transition to a clean **STEP** energy economy **Identify** issues Environment **Human Resources** Society We analyzed the external environment, our business strategies, and other factors to create Decarbonization/expansion of renewable Respect for diversity Energy supply in pursuit of customer satisfaction a list of 59 issues relevant to our company. Securing and developing global, strategic Application of digital technology enerav human resources Leveraging our technology to make Compliance with environmental legislation Securing and developing skilled workers contributions in various fields STEP Management of employee health and workplace Improved efficiency of thermal power Communication with local communities safety and sanitation Improvement of energy infrastructure in Assess the significance generation Promotion of work–life balance developing countries of the issues Assess the significance of the 59 issues from Step 1 on stakeholders and society on the one Ø hand, and on the company on the other. **STEP Human Rights** Assess relevance • Consideration of the human rights of local community members Verify the validity of the issues assessed in Step 2 in terms of the corporate strategies and stakeholders' perspectives. Governance STEP **Identify Materialities** Enhancement of corporate governance Safety of facilities (process safety, disaster prevention and response measures) Risk identification, management, and response Regarding the issues considered in Step Response to large-scale disasters and pandemics Strengthening of earning power 3, obtain approval from the Sustainability Rigorous compliance Stable supply of electricity Promotion Committee (chaired by the company Bilateral communication with stakeholders. president).

# JERA's Materialities

Initiatives OKPI

Financial and Corporate Information

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Category	Materiality	Relevant SDGs	Main initiatives	Relevant page
Environment	Decarbonization/expansion of renewable energy		Promotion of "JERA Zero CO <sub>2</sub> Emissions 2050"     OLNG thermal power replacement development in Japan: 7–9 GW (5–7 sites in 2025) ©Equity ownership in renewable energy output: 5 GW (2025)     O20% reduction in CO <sub>2</sub> emission intensity for thermal power generation compared to the Japanese government's outlook for FY2030	
	Improved efficiency of thermal power generation			
	Compliance with environmental legislation		<ul> <li>Implementation of environmental conservation based on environmental laws and regulations, ordinances, and agreements with local governments.</li> <li>Zero violations of environmental laws and regulations, etc.</li> </ul>	P43-46
Human Resources	Respect for diversity		<ul> <li>Career awareness-enhancing leadership and management position training for women</li> <li>Increasing the ratio of women in leadership positions (executives: 15%, management positions: equivalent to woman employee ratio)</li> <li>Establishment in April 2021 of JERA Miraiful (a special subsidiary for the employment of people with disabilities) and promotion of employment of people with disabilities</li> </ul>	P48
	Securing and developing global, strategic human resources	E 1001 0 00710100	Flexible employment of new and mid-career hires in accordance with business needs     A diverse variety of training supporting independent career development	P49
	Securing and developing skilled workers	6 24	Promotion of technology insourcing     Certification of knowledge, technologies, and skills that should be acquired by all technical employees	
	Management of employee health and workplace safety and sanitation	¥ 111	<ul> <li>The formulation of "Safety Philosophy and Policies and Principles of Conduct" in March 2021, fomenting safety awareness, including in Group companies</li> <li>Zero fatal accidents @Setting a new record for number of continuous days without an accident</li> <li>Continuous education on mental health @Stress check total health risk scores at or below 100 points (the national average)</li> </ul>	P51-52
	Promotion of work-life balance		Promotion of "JERA Work Design" to design workplaces, structures, and corporate culture in order to realize new working styles	P50
- Society -	Energy supplied in pursuit of customer satisfaction		Selling electricity and gas that can flexibly meet the diverse needs of customers, such as long-term/large-scale to short-term demand	P27-28
	Application of digital technology		Global development of cloud computing, network maintenance, and system sharing     Promotion of digital power plants that combine our Kaizen (constant improvement) and technological capabilities with digital technology	P24, P30
	Leveraging our technology to make contributions in various fields	7 contention 9 december 17 for the second	Promotion of decarbonization utilizing renewable energy and contributing to local communities by strengthening disaster resilience	P54
	Communication with local communities	🌞 👶 🏵	<ul> <li>Formulation of "Social Contribution Activity Policy" in July 2021 and the implementation of social contribution activities inside and outside Japan</li> <li>Establishment of systems and implementation of measures aimed at strengthening coordination with local communities, such as periodically exchanging information with local governments and administrative bodies</li> </ul>	P53-54
	Improvement of energy infrastructure in developing countries		<ul> <li>Promotion of zero CO<sub>2</sub> emissions in accordance with the conditions of individual countries</li> <li>Promotion of the Philippine project to relieve unelectrified communities (contributing to the Philippine government's target of achieving a 100% household electrification by 2022)</li> </ul>	P15-20, P54
Human Rights	Consideration of the human rights of local community members	3 minute 	<ul> <li>Respecting human rights, including the development of working environments and safety for all parties concerned in Japan and overseas.</li> <li>Promotion of human rights education through seminars and other means</li> </ul>	P40
- Governance - -	Enhancement of corporate governance		Enhancing Board of Directors deliberations based on the results of Board effectiveness evaluations     Ensuring diversity in the Board of Directors (appointment of woman and foreign national directors)	P35-37
	Risk identification, management, and response		Accurate awareness and advance prevention of risks accompanying business activities	P38-39
	Strengthening of earning power	2 demain 3 demain 16 tal set	©Consolidated net income of 200 billion yen (2025) ©Credit rating: A or higher (2025) ©Synergy effect of 100 billion yen/year within 5 years from integration	P11-12, P21-2
	Stable supply of electricity		<ul> <li>Response to variation in demand and supply through optimization of entire value chain (from fuel procurement to power generation)</li> <li>Improvement of equipment availability and detection of predictors of power-generation equipment abnormalities utilizing the IoT</li> </ul>	P27-30
	Safety of facilities (process safety, disaster prevention and response measures)	🌞 👶 🔀	Advanced BCP/BCM enabling continuation and restoration of stable supply     Implementation of coordinated drills with relevant local governments and neighboring companies in preparation for a fire on power plant grounds	P39,
	Response to large-scale disasters and pandemics		• Implementation of emergency recovery drills in preparation for power plant operation stoppages caused by a large-scale earthquake, etc.	P51-52
	Rigorous compliance		• Further inculcation of Compliance Policy and Compliance Code of Conduct • Strengthening of transmission of information on compliance starting with top messages • Implementation of e-learning for executive officers and employees	P41-42
	Bilateral communication with stakeholders		Proactive, interactive communication with all stakeholders     Timely, accurate disclosure of information and opinion exchange for shareholders and investors     Timely, accurate disclosure of information via a variety of media	P55

Creation: ESG G: Corporate Governance

Foundation for Value

# **Corporate Governance**



### Issue Awareness

Corporate governance that supports management in making appropriate decisions is essential to sustainable corporate growth and enhancement of corporate value in the medium and long terms. As the business environment undergoes rapid change, it is necessary that we take on various governance issues in a timely manner. These issues include the Board of Directors exercising its functions to an even greater extent, the securing of diversity in human resources, and the strengthening of initiatives for sustainability challenges.

JERA will strive to continuously strengthen its governance in order to earn the trust of shareholders, investors, and all of our stakeholders.

### Overview of Corporate Governance



### Basic Approach

The basic principle of our corporate governance is to ensure an autonomous and independent corporate culture as well as a management system capable of fair, swift decision-making by strong and sound management/financial structures trusted by the global energy market. To achieve these principles, we established our own "Corporate Governance Guidelines" in October 2019 and enact a proper corporate governance system as well as constantly work to improve and strengthen it.

#### WEB JERA Corporate Governance Guidelines

#### https://www.jera.co.jp/english/corporate/corporate\_governance/

\*The guidelines set out a basic approach and system for our corporate governance and serve as a code of conduct for our directors in pursuit of sustainable growth and enhancement of corporate value.

### Governance System

In order to expand business throughout the world in a wide range of fields, the Board of Directors consisting of directors from JERA who are familiar with JERA's business, and outside directors who have extensive knowledge and experience shall make material business decisions and supervise business executions. Further, JERA has corporate auditors as independent officers (the "Corporate Auditors") who shall be responsible for auditing the execution of the Directors' duties.

In addition, in order to separate the decision-making and supervision of management from the execution of business and to effectuate accurate and prompt decision-making and efficient business execution, JERA has adopted an executive officer system where executive officers are responsible for business execution based on the decisions made by the Board.

#### Diagram of Corporate Governance System

#### (as of August 31, 2021)


Creation: ESG G: Corporate Governance

Foundation for Value

### **Corporate Governance**

## Roles, Responsibilities, and Diversity of the Board of Directors

Based on applicable laws and regulations and our Articles of Incorporation and internal rules, the Board of Directors determines management objectives and business strategies, makes other important decisions for managing the company, and supervises the execution of duties. Additionally, we believe that responding swiftly and appropriately to the business environment and ensuring the objectivity and soundness of our decisions toward that end are vital for expanding business throughout the world in a wide range of fields. Therefore, our efforts to ensure diversity of knowledge, experience, and other factors among the Board of Directors include hiring directors who neither work for the company nor are shareholders, in addition to executive directors who work for the company and directors who were originally shareholders.

### Support for Directors

We have established a system that provides directors with the support they need to properly perform the duties expected of them. Among other things, the system provides each director with correct and complete information as well as opportunities to obtain knowledge and recommendations about our company's core businesses from outside experts from around the world. In FY2020, we reviewed our business strategies for key regions of Asia and North America based on expert advice and discussed information disclosure and ESG initiatives appropriate for a global company. These efforts brought innovativeness and depth to the deliberations of the Board of Directors, and obtained expertise that will contribute to the further development of our business domains.

The topics of Directors' Discussions in FY2020 were wideranging, including such priority management issues as decarbonization strategies, regional strategies, and human resources strategies in addition to sharing and analyzing the latest systems and policy trends inside and outside Japan.

### Evaluation of Effectiveness of the Board

Once each year, we evaluate each director and corporate auditor on matters such as their contributions in Board meetings and operation status to help continuously enhance and improve the Board's effectiveness. The Board of Directors analyzes and assesses the results of these evaluations, considers and implements measures to address the issues identified, and constantly works to improve the Board's functionality and effectiveness.

In FY2020, we aimed to create an environment enabling the Board of Directors to concentrate further on strategic deliberations in order to further expand our business domains and take pioneering measures for a decarbonized society. Examples of measures included enhancing briefings for outside directors and establishing regular reports concerning the basic state of the company. In addition, we worked on maintaining and enhancing the effectiveness of the Board of Directors, even in the midst of the COVID-19 pandemic, through proactive utilization of teleconferencing, and increasing the frequency of Board of Directors meetings as well as Directors' Discussions. In self-assessments of the effectiveness of Board meetings in FY2020, the Board judged that although there were certain accomplishments, particularly the holding of Board meetings during the COVID-19 pandemic, further improvements to enhance deliberations are needed. These include the selection of points of deliberation, and the utilization of the opinions of outside experts.

Accordingly, in FY2021, we are aiming to further enhance the Board's deliberations. Efforts include revising standards concerning Board discussion and reporting matters, working to compile materials cognizant of strategic views, and the building of a mechanism to incorporate the opinions of outside experts regarding high-level and priority issues.

### Leadership Panel and Expert Committees

We have established a Leadership Panel comprising the company chairman, president, vice president, and executive officers based on policy set out by the Board of Directors. The panel provides opportunities to deliberate, make decisions on, and receive key reports about important management matters. We have also established expert committees to assist the Leadership Panel in each of the main fields under its control, and the committees offer recommendations from their perspectives as experts to supplement the panel's deliberations.

With the exception of limited areas for which there is no expert committee coverage, the Leadership Panel incorporates the expert committees' recommendations into their deliberations and decisions on all relevant matters to discuss and report to the Board of Directors. The panel reports the committees' recommendations to the Board along with the results of their deliberations.

### Strengthening JERA Group Governance

JERA provides suitable support to Group companies so that they may autonomously maintain and make use of systems for ensuring the appropriateness of operations. Specifically, we strive to make it possible for Group companies to engage in efficient decision-making and execute professional duties swiftly and appropriately through means such as defining responsibilities and authority via our Internal Rules. For important matters in the execution of professional duties, we have established a system for Group companies to engage in advance discussion and make reports in accordance with the internal rules.

In addition, we provide periodic education and training for new directors and officers, as well as candidates for these positions, including for those of Group companies, in order to deepen understanding of the duties and obligations required of directors and corporate auditors, such as our ideal for corporate governance.

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<sup>1</sup> Indicates an outside director as provided for in Article 2-15 of the Companies Act. <sup>2</sup> Indicates an outside auditor as provided for in Article 2-16 of the Companies Act.

**G: Directors & Officers** 

## **Directors and Officers**



### **Corporate Auditors**



Attendance / Number of Board of April 1985: Joined Chubu Electric Power Co., Inc. Company Auditors meetings held April 2018: Executive Officer, Chubu Electric 17/17 (100%) Power Co., Inc.: General Manager, Thermal Power Generation Business Department, Power Generation Company April 2019: Corporate Auditor, JERA



Attendance / Number of Board of Directors meetings held 23/23 (100%)

Auditor<sup>2</sup>

April 1985: Joined Japan Development Bank June 2015: Managing Executive Officer, Directors, Development Bank of Japan Inc. June 2016: Executive Director, Research

Institute of Capital Formation, Development Bank of Japan Inc.



April 2019: Corporate Auditor, JERA

Attendance / Number of Board of Directors meetings held Attendance / Number of Board of Company Auditors meetings held

17/17 (100%)



July 2016:



Auditor<sup>2</sup>

Minako Fuiiie

Attendance / Number of Board

Attendance / Number of Board of

Company Auditors meetings held

of Directors meetings held

23/23 (100%)

17/17 (100%)

April 1988: Joined Tokyo Electric Power Co., Inc. General Manager, Tsurumi Branch Office, TEPCO Power Grid Inc.

April 2019 Corporate Auditor JERA

### Appointment of Directors

Candidate Directors shall be decided by a resolution made by the Board after deliberation by the Nomination and Compensation Committee, taking into consideration personal characteristics and core competencies appropriate for their role as Directors and the structure of the Board to ensure diversity.

The Nomination and Compensation Committee comprises at least three directors, including two outside directors who were shareholders before they became directors. and exists to discuss matters involving personnel affairs and compensation of directors, corporate auditors, and executive officers.

Creation: ESG G: Risk Management

Foundation for Value

## **Risk Management**



### Issue Awareness

Complexly interconnected global risks and ESG issues are emerging, including increasingly frequent and intense natural disasters and infectious diseases, as well as climate change, the exhaustion of a variety of resources, economic disparity and poverty, and political instability. Coupled with the development of the global economy and an increasingly borderless world, amid such risks becoming ever more diverse and complicated with each passing year, companies must establish and maintain systems for appropriately responding to a variety of risks. The JERA Group will work to continuously enhance its risk management, in order to fulfill its social responsibilities as an energy provider that supports social infrastructure.

### Basic Approach

The JERA Group continues to work toward highly effective risk management. The reason for this is that we seek to gain a proper understanding of and prevent the risks associated with our corporate activities in addition to working to minimize loss when these risks occur. We view these efforts as underpinning the enhancement of our corporate value and fulfilling our social responsibility to our stakeholders.

### Risk Management System

The JERA Group has established a highly effective risk management system, under the overall responsibility of the president. The purpose is to fulfill such crucial social responsibilities as providing a stable supply of energy. Specifically, we have established "Internal Rules for Risk Management" for risk management during normal times, and "Internal Rules for Crisis Management" for responding to crises and emergencies.

### Diagram of Risk Management System

(as of August 31, 2021)



Each responsible unit is expected to manage the risks associated with its business activities as a part of its execution of duties; risks that affect multiple units are properly managed with crosssectoral responses. In addition, managers of risk management report to the Risk Management Committee whenever there are major changes to the risks they are managing.

The Risk Management Committee chaired by the JERA president seeks to prevent the occurrence of risks that could have a severe impact on the Group's business. When such risks occur, the response is swift and appropriate in an effort to minimize the impact on the Group's business, and necessary reports are made to the Risk Management Committee on a quarterly basis. Of those risks that could severely impact the Group's business, risks particularly requiring management by the Board of Directors are selected as "serious risks subject to control by senior management." These are discussed and reported on at Board of Directors meetings regularly and as needed. In turn, the Board of Directors gains a full understanding of each risk and exercises supervision to ensure that these risks are properly managed.



Creation: ESG G: Risk Management

Foundation for Value

## **Risk Management**

### Highly Effective Risk Management

The JERA Group's risk management is based on integrated risk management and the management conducted as part of fiscal health evaluations and investment evaluations of individual projects, and through their integral functioning, we engage in appropriate risk management. In our integrated risk management, we define possible risks as one of three types: "operational risk," "market risk," and "credit risk." After quantifying our total risk exposure based on our market risk and credit risk, the difference with our risk capital is calculated as our risk buffer. Rooted in the principle of keeping our operational risk covered within the bounds of our risk buffer, we engage in detailed management in accordance with our risk map.

Meanwhile, for our financial health evaluations, we first verify the financial health of the company utilizing the credit rating methodologies of credit rating organizations. We then evaluate the outlook for credit rating levels in the long term as part of the business-plan formulation workflow. Through these means, we confirm that the investment grade is secured in the long term. We appropriately evaluate, manage, and monitor the risks of individual investments and other projects through examinations conducted by the Investment Valuation Committee.

### Integrated Risk Management



### Countermeasures for Large-Scale Disasters

JERA owns about half of the thermal power plants in Japan. Accordingly, we have formulated and published a disaster management operation plan based on "the Basic Act on Disaster Management in Japan," as well as "a Civil Protection Business Plan" and "an Operation plan for Pandemic Influenza and "New Infection Diseases Preparedness and Response." We have also prepared emergency disaster countermeasure regulations and manuals to enable swift decision-making and response in the event of emergencies.

In light of the national and local governments' revisions of damage estimates and disaster prevention measures for the earthquakes occurring directly beneath the Tokyo metropolitan area or off the Nankai Trough, which are of recent concern, we have been undertaking earthquake countermeasures and other necessary facility measures, as well as periodically conducting drills to simulate large-scale disasters.

### Enhancement of JERA's BCP and BCM

JERA has taken a variety of measures to deal with the occurrence of a large-scale disaster. We formulated our current plans and internal rules, etc. based on plans and rules inherited when the thermal power business of Tokyo Electric Power Company and Chubu Electric Power Company was integrated into JERA's thermal power business.

Taking into account the expansion of our business domains and changes in the business environment post-integration, we aim to further enhance our ability to respond to a disaster. Accordingly, at the present time, we are investigating our existing countermeasures and will formulate BCP and BCM for JERA that conform to international standards as appropriate for a global company. In addition, through this initiative, we will work not only to enhance the JERA Group's disaster response capabilities, but also to utilize the knowledge thus gained to support the disaster prevention preparations of local communities and other companies.

### Basic Policy for JERA's BCP and BCM

- In the occurrence of any disaster or risk event, we ensure public safety premised on compliance with laws and ordinances, placing maximum priority on human health security.
- We rapidly restore and continue operations concerned with our core business of the provision of power and gas to contribute to society and the community in order to fulfill our responsibilities as an energy provider that supports social infrastructure in Japan.

### COVID-19 Response

Even amid the global COVID-19 pandemic, the JERA Group believes that maintaining a stable supply of energy is a social responsibility of the utmost importance. Accordingly, with first priority being given to protecting the health and safety of the residents of Japan, our employees, and their families, we have implemented thorough measures to prevent the spread of infection in our workplaces.

### **Examples of Specific Initiatives**

Companywide	<ul> <li>Reduction of unnecessary or non-urgent operations as the situation develops, concentration of resources on the operations most important for the continuation of our business</li> </ul>
Power Plants	<ul> <li>Restriction of access to central control rooms in facilities important to power provision</li> <li>Establishment of support systems such as a system to secure alternate personnel for shift employees</li> </ul>
Head Office/ Branch Offices	<ul> <li>Identification of duties requiring on-site response and targeted employees</li> <li>Full utilization of staggered work hours and telework depending on the spread of COVID-19</li> <li>Migration of management meetings and other major meetings to the web</li> </ul>
Procurement	<ul> <li>Identification of the status of global LNG/coal production plants and receiving terminals globally, and monitoring of market trends</li> </ul>

## **TOPICS** Achieving a High Rate of Telework

Since the time of our establishment, we have had global business activities in mind, distributing laptops and iPhones to all employees, and building an IT environment enabling them to work anywhere, anytime, both in Japan and overseas. As a result, excluding workplaces such as power plants requiring physical attendance in order to ensure the stable provision of power, we achieved our highest rate of telework to date, close to 90%, in mid-May 2020, without causing any disruption to our business activities.

Scope of calculation*	Target period	Target rate	Achievements (average rate)
Head Office, East Japan Branch, and West Japan Branch	April 26, 2021– May 28, 2021	80% (during the declaration of a state of emergency)	80%

\*The number of employees excluding workplaces such as power plants requiring physical attendance in order to ensure the stable provision of power (approximately 1,770 employees)

Financial and Corporate Information

Creation: ESG G: Information Security and Human Rights

Foundation for Value

# **Information Security**

### Basic Approach

The use and application of information technology is vital for fulfilling our mission to help the people of the world achieve prosperous lifestyles and invigorate industry and economy by providing a stable supply of energy. Accordingly, we strive to take information security measures and have established an "Information Security Policy" in an effort to appropriately protect information assets and enhance the safety of our business dealings.

### Enhancing Information Security Measures

The scope of the Information Security Policy includes everyone involved in the company's operations and all things, environments, and other resources used therein. The policy also covers the proper management and protection of relevant information assets, as well as the strengthening of security measures for responding to cyberattacks and other threats.

We continuously educate all employees who work with information assets with the aim of improving their technological level and awareness of information security, expending every effort to observe laws, regulations, our Information Security Policy, and relevant regulations. In addition, in an effort to instill awareness of information security and facilitate swift responses to information security incidents, we give each employee a "security card" containing rules to be observed. Along with this, we provide education through e-learning and other means, and continuously conduct training on targeted email attacks for all employees in order to reduce the risk of virus infiltrations and information leaks due to such emails. It is worth noting that once again in FY2020, no major incidents involving information security or the protection of personal information occurred.

## Responding to Cyberattacks

Amid the rising threat of cyberattacks, the maintenance of mechanisms for swift and appropriate response is essential. We continuously participate in the activities of the "Japan Electricity Information Sharing and Analysis Center (JE-ISAC)," an organization through which electricity businesses share and analyze

cybersecurity information, and gather such information to inform our responses to increasingly advanced and sophisticated cyberattacks such as ransomware. In FY2020, we also participated in training organized by the "National Center of Incident Readiness and Strategy for Cybersecurity" in order to further strengthen our organizational response capabilities.



## Basic Approach

In our "JERA Group Compliance Policy," we pledge to be an upstanding member of the global community by supporting protection of the human rights advocated in the Universal Declaration of Human Rights and respecting the diverse cultures and customs of countries and regions around the world. In addition, in the "JERA Group Compliance Code of Conduct," we pledge to respect human rights in all aspects of business activities, and not to discriminate on the basis of race, skin color, gender, language, religion, political or other opinions, nationality or social origin, property, family origin or other social status, or for any other similar reason; and we abide by this pledge.

### Initiatives to Respect Human Rights

**Human Rights** 

JERA possesses a global value chain, from fuel upstream development to transportation, storage, and power generation and sales. As harassment, undue discrimination, and other human rights issues become more severe, we perceive increasing respect for human rights to be a priority issue. We are currently formulating a human rights policy based on "the United Nations Guiding Principles on Business and Human Rights." We are also working to build a due diligence mechanism for human rights to ensure respect for human rights, including ensuring safety and improving the working environments of all people in and outside Japan.

In addition, in March 2021, we invited attorney Atsuko Honda from the Anzai Law Office as an outside lecturer to hold a seminar on the "topic of harassment prevention and response." Covering various types of harassment resulting from the diversification of working styles and changes in social conditions, the lecture deepened understanding of leadership methods for preventing harassment in the workplace and what to do in the event of its occurrence. It also reaffirmed our aim of establishing lively workplaces in which human rights are respected. Going forward, we will continue to regularly engage in educational and awareness activities.

## **TOPICS** Establishment of a Harassment Consultation Desk

In FY2021, we established "Internal Rules for Harassment Prevention" in order to maintain workplace environments which are free from harassment and comfortable for employees to work in. These rules outline the prevention and elimination of harassment in the workplace and prescribe measures to be taken in the event of a problem caused by harassment. JERA had already established a "Whistleblowing Desk," but with the creation of these internal rules, we established a new consultation desk for discussing harassment within and outside JERA (internal: Labor Affairs and Human Resources Group; external: law office).

### Creation: ESG G: Compliance

Foundation for Value

## Compliance



### Issue Awareness

Amid an unending stream of corporate scandals, society and stakeholders are becoming more and more critical of companies. Of particular note in recent years, in addition to bribery and problems with competition laws, issues concerning human rights in supply chains have been widely reported, and, alongside laws, ordinances, and international rules, there is strong pressure on companies also to comply with social norms. The JERA Group supports the principle of a charter regarding compliance advocated in Japan as well as global society and acts in good faith based on a heightened sense of ethics befitting a global company.

### Basic Approach

The JERA Group is conscious of its mission as a member of the global business community and gains and maintains the trust of its stakeholders by ensuring thorough compliance with the laws and regulations of Japan and other countries, acting in good faith based on a heightened sense of ethics befitting a global company, and otherwise acting in accordance with "the JERA Group Compliance Policy" and the "JERA Group Compliance Code of Conduct."

WEB JERA Group Compliance Policy

https://www.jera.co.jp/english/corporate/compliance/ethicspolicy

- WEB JERA Group Compliance Code of Conduct
- https://www.jera.co.jp/english/corporate/compliance/codeofconduct/

### Compliance Promotion System

The JERA Group has installed a Compliance Committee to promote compliance management and to function as a body for reviewing and determining measures for ensuring that compliance is carried out and takes hold within the Group. The Compliance Committee comprises the Chairman, President (who serves as the Committee Chairman), Vice President, Chief Operating Officers, and Heads of Branches of JERA. The Committee Chairman has the authority to nominate outside attorneys and other outside experts as temporary committee members as needed. In addition, the Compliance Committee makes proposals or reports to the Board of Directors as necessary, on the measures related to overall compliance deliberated by the Committee, including consideration, evaluation, investigation, and deliberated misconduct, etc., as well as corrective measures and measures to prevent recurrence thereof, and other important matters.

Furthermore, the Compliance Committee has assigned compliance managers and persons for promoting compliance at each workplace and place of business, as well as at Group companies, to establish a system that promotes a unified approach to compliance between JERA and Group companies.

### Compliance Promotion

The Compliance Committee reviews and determines measures for promoting compliance for each fiscal year in an effort to ensure that compliance is carried out and takes hold within the JERA Group in accordance with "the JERA Group Compliance Policy" and "the JERA Group Compliance Code of Conduct", while considering factors such as the result of questionnaire surveys administered to employees.

In addition, we hold meetings on compliance with our Group companies inside and outside Japan, ensuring that compliancerelated initiatives and issues are shared throughout the Group while at the same time strengthening our promotion of compliance in the Group. We continue to conduct compliance training and implement various other measures to ensure that awareness of compliance takes hold in the Group, and that every effort is made to achieve compliance.

## Diagram of the Compliance Promotion System (as of August 31, 2021)



#### Financial and Corporate Information

G: Compliance

### Compliance

#### Primary Compliance Promotion Measures in FY2020

Measure	Description	
Messages from management	Messages about compliance from management executives (April and October)	
Training	Invited outside lecturers to conduct trainings at Compliance Committee and Group Compliance Promotion Council meetings and made recorded movies available to all employees	
e-learning	Conducted e-learning over two sessions on the Compliance Code of Conduct for all directors, officers, and employees (approximately 4,400 people; participation rate: first session 99.5%, second session 98.6%)	
Questionnaires	Administered questionnaires about awareness of compliance (response rate: 77.0%)	
Improvement of Group promotion systems	<ul> <li>Held regular Group Compliance Promotion Council meetings with domestic subsidiaries Enhancing practical discussion of Group compliance in Japan</li> <li>Started discussions and countermeasure investigations regarding the creation of a Group compliance system with major overseas subsidiaries (including gaining a full understanding of current conditions regarding each company's compliance systems and state of serious risk management)</li> </ul>	

### Corruption Prevention

The JERA Group has established a code of conduct for preventing all forms of corruption in accordance with "the JERA Group Compliance Policy" and "the JERA Group Compliance Code of Conduct."

In February 2020, in response to examples of improprieties by other power companies in Japan, and in an effort to ensure fair, honest relationships with suppliers, we established "Internal Rules for Giving and Receiving Money and Goods," setting out specific prohibitions for giving and receiving money and goods to and from business partners. We also explain these rules to our suppliers or potential customers when we hold briefings on our procurement policy.

### Excerpt from "the JERA Group Compliance Code of Conduct," on Preventing Corruption

- We always maintain proper and healthy relationships with our business partners and do not provide them with money, goods, entertainment, or any other economic benefits that exceed sound judgement.
- In our procurement activities, we provide open, fair, and equal participation opportunities in both domestic and overseas markets and select suppliers through rational and transparent procedures.
- We establish and maintain fair and open relations with the political and governmental counterparts of each country and region in compliance with domestic and foreign laws and regulations, and internal rules.
- We do not entertain, provide goods, or provide any other economic benefits to public officials or anyone in an equivalent position, domestic or overseas.
- We do not make any payments if we are aware that a portion of the payments made to agents or consultants, or any such parties, is being or is suspected of being diverted for the purpose of engaging in improper activities with public officials or persons in an equivalent position.

### Fair and Equitable Trade with Suppliers (CSR- and ESG-Based Responsible Procurement)

Both domestically and abroad, we will go beyond merely complying with the law, acting to ensure fairness and justice in the pursuit of our trading and business activities. We uphold free trade and market competition and conduct fair business with suppliers in accordance with the Antimonopoly Act and relevant domestic and foreign laws and regulations. In an effort to promote mutual diligence, maintain close communication, and further establish trust-based relationships with our suppliers, we hold briefings on our procurement policy at which we listen to each other's opinions and wishes. Note that as part of COVID-19 measures, in 2020, these briefings were conducted with the exchange of documents.

We have established a Procurement Policy, and, in addition to thoroughly assuring quality and reducing procurement costs, make efforts to engage in CSR- and ESG-based, responsible procurement activities through means such as the observation of laws, regulations, and corporate ethics; the ensuring of safety; and BCP.

### WEB Procurement Policy

https://www.jera.co.jp/english/corporate/procurement/

### Whistleblowing System

The JERA Group has established a Whistleblowing desk for receiving tips from inside and outside the company in an effort to prevent as well as quickly discover and resolve compliance violations. The desk can be reached via email 24 hours a day and accepts tips and reports of legal violations as well as all types of corruption (including bribes), violations of rules of employment and internal rules, harassment and human rights violations, actions that damage the Group's reputation and social credibility, and more. To promote the use of the whistleblowing system, we are working to improve its reliability and periodically inform employees about it.

Our employees or temporary employees can make reports either under the informant's real name or anonymously, and we will conduct the investigations in response to the wishes of informants. We expend every effort to maintain the confidentiality of the content of reports and findings of investigations, as well as to protect informants by prohibiting disadvantageous treatment and retaliatory measures against them. In addition, when compliance violations are confirmed, we shall take various corrective and recurrence prevention measures.

In FY2020, the desk received twelve inquiries and reports. On October 30, 2020, we became the first energy company to realize the Whistleblowing Compliance Management System (self-adaptation declaration registration) after our system was deemed to meet the certification requirements set out by the Consumer Affairs Agency of Japan.



Creation: ESG E: Environment

Foundation for Value

# **Environment**

October 2020. announcement of "JERA Zero CO<sub>2</sub> Emissions 2050"



recommendations

### Issue Awareness

In accordance with the world's increasing population and the development of the international economy, global-level environmental issues are becoming increasingly severe. These issues include overuse of resources, waste and pollution problems, and loss of biodiversity. In particular, increased greenhouse gas emissions from human activity are causing global warming. Disasters resulting from abnormal weather around the world are increasing in frequency and intensity. threatening people's lives and economic activity.

Against this backdrop and in response to the adoption of the SDGs as well as the Paris Agreement by international society, efforts are being made to accelerate the establishment of targets and mechanisms for countering climate change, conserving biodiversity, and realizing a recycling-oriented society. There are also increasing expectations and calls for national governments and companies to develop their own initiatives.

In order to realize a sustainable society that promotes the coexistence of the environment and the economy, JERA are working with our stakeholders and utilizing our knowledge, skills, and technology to come up with our own solutions to environmental issues.

### Basic Approach

As a leader in the thermal power generation business in Japan. JERA respect energy and environmental policy represented by the Strategic Energy Plan, and proactively promote the development of renewable energy.

Furthermore, as a global energy company, we fully recognize the importance of global-scale environmental protection, strictly observe the environmental laws, regulations, and ordinances of each country and region, and make efforts to reduce CO<sub>2</sub> emissions and other environmental burdens with the aim of realizing a sustainable environment, society, and economy.

### Environmental Management System

Our business - investing various resources to generate power contributes to society by providing the stable supply of electricity and gas that underpins industry and prosperous lifestyles. On the other hand, our business activities generate CO<sub>2</sub>, waste,

### Material Balance (FY2020\*1)

Coal:

LNG\*2:

Biomass:

Total energy

consumption

50.70 million

kL (crude oil

equivalent)

Water usage

intake:

Total:

Petroleum:

INPUT **Business activities** OUTPUT Fuel consumption for power generation GHG emissions (CO<sub>2</sub> equivalent) 13.07 million t 114.95 million t-CO<sub>2</sub> Scope 1: Gas and LNG Gas sales sales volume: 20.000 kL Scope 2: 4.000 t-CO<sub>2</sub> 27.40 million t Scope 3: 20.68 million t-CO<sub>2</sub> 390.000 t Total: 135.64 million t-CO<sub>2</sub> Fuel upstream Fuel Fuel sales development transportation and trading Electric power SOx emissions **Fuel procurement** Gross wastewater 3.12 million t consumption at volume offices, etc. 5.090 t 7.51 million m<sup>3</sup> 9.51 million kWh Power Sending-end NOx emissions COD emissions generation power: 17,800 t 20 t Industrial water 17.71 million m<sup>3</sup> Disposal by reclamation Tap water intake: 810,000 m<sup>3</sup> 10,000 t 244.6 billion kWh Groundwater usage: 180,000 m<sup>3</sup> 18.70 million m<sup>3</sup>

\*1 Figures for JERA in Japan only and Hitachinaka Generation Co., Inc. \*2 Includes utility gas and LPG

and other materials that create environmental burdens. We make many proactive efforts to minimize these materials as well as resource consumption, including improving power generation efficiency, reducing CO<sub>2</sub> emissions, eliminating air pollutants, and recycling waste. We continue to contribute to the establishment of a sustainable society by moving ahead with the enhancement of our environmental management, an effort led by the Environment Subcommittee of the Sustainability Promotion Committee.

### Environmental Education and Communication

We conduct training for all employees involved in environmental work at power plants to enable them to acquire the knowledge they need. We are also proactively disclosing environmental data and the like in response to the recent increase in calls for the disclosure of nonfinancial information.

Creation: ESG E: Environment

Foundation for Value

### Environment

### Reducing CO<sub>2</sub> Emissions

In October 2020, we unveiled "JERA Zero CO<sub>2</sub> Emissions 2050" as a future-oriented initiative to reduce CO<sub>2</sub> emissions. We accept the challenge of this initiative: to achieve zero CO<sub>2</sub> emissions in all JERA businesses throughout the world by 2050 with the aim of contributing to the realization of a sustainable society in line with our mission to provide cutting-edge solutions to the world's energy issues.

We have already proactively promoted the renewable energy business throughout the world and moved ahead with sustained initiatives through our participation in relevant organizations. We have begun considerations for offshore wind power development in the sea off Akita Prefecture and in Ishikari Bay to follow in the UK and Taiwan. We are also developing solar power generation in many Asian countries.

We aim to achieve zero CO<sub>2</sub> emissions by supplementing the adoption of renewable energy, which is easily influenced by natural conditions, with stable power generation from zero-CO<sub>2</sub>-emission thermal power plants. We intend to continue moving forward with various initiatives toward achieving "JERA Zero CO<sub>2</sub> Emissions 2050."



### Nishi-Nagoya Thermal Power Station Group 7-1 and 7-2: **Highly Efficient Combined Cycle LNG**

**Power Generation System Design efficiency** 

(low heating value)

The world's most efficient combined cycle power generation system reduces fuel consumption and CO<sub>2</sub> emissions

JERA Zero CO<sub>2</sub> Emissions 2050 >> p. 15 B

### Preventing Air Pollution

The air pollutants discharged by our thermal power plants include sulfur oxides (SOx), nitrogen oxides (NOx), and soot from boiler exhaust and other sources. We are taking steps to reduce emissions by working to improve incineration methods and installing exhaust gas desulfurization and denitration systems, electric precipitators, and the like, all in an effort to comply with exhaust standards set out in laws and regulations as well as local ordinances and environmental preservation agreements with local governments. In FY2020, our SOx and NOx emission intensities were 0.02 g/kWh and 0.07 g/kWh, respectively; we have maintained substantially lower figures than leading countries in Europe and the Americas.



### Water Quality Conservation Measures (Consideration for Marine Environments)

We discharge wastewater from our thermal power plants properly, monitoring it constantly using equipment such as continuous water quality measurement systems and purifying it using wastewater treatment systems so that it satisfies wastewater standards. We also sufficiently consider the impact on surrounding marine environments; for example, to limit the warming of ocean water used in our condensers, we practice slow intake from deep ocean areas with low water temperatures, and release water on the surface at reduced release speeds.

## TOPICS

## Joining the "Ocean Renewable Energy Action Coalition"

In 2020, JERA joined the "Ocean Renewable Energy Action Coalition," which explores initiatives that need to be implemented by national governments and the industrial world for the sustained expansion of offshore wind power generation with a target year of 2050.

Aiming to be a global leader in renewable energy, JERA is proactively promoting large-scale offshore wind power generation projects inside and outside Japan. JERA is also contributing to the sustained promotion of offshore wind power generation through participation in industry groups.



Construction of Formosa 1 Offshore Wind Farm of Power Generation Project in Taiwan © Formosa I Wind Power Co., Ltd. All rights reserved.

Creation: ESG E: Environment

Foundation for Value

### Environment

### **Effective Use of Resources**

We recycle proactively in order to make effective use of limited resources. One of our main waste materials is coal ash from the coal we use at thermal power plants. We are promoting the effective use of coal ash as a raw material for cement and as a



Coal ash effective utilization rate:

99.99%

### Proper Storage and Treatment of PCB Waste

PCB (polychlorobiphenyl) waste retained at thermal power plants, based on the related laws and regulations, is stored/ managed appropriately and progresses through planned processing. Note that equipment using PCB as insulating oil (high-concentration PCB equipment) is entrusted to JESCO (Japan Environmental Storage & Safety Corporation) for disposal.

### State of Waste Treatment Facility Maintenance

The Waste Disposal and Public Cleansing Act in Japan requires companies to publish information on the state of their waste treatment facility maintenance. In April 2019, JERA inherited licenses to install waste treatment facilities from TEPCO Fuel & Power and the Chubu Electric Power Company under the Waste Disposal and Public Cleansing Act, and we publish information about the state of facility maintenance—past as well as present—on our website.

WEB State of Waste Treatment Facility Maintenance

### Control of Chemical Substances

Regarding chemical substances used at our thermal power plants, we observe the PRTR Act in Japan (Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof) and make efforts toward strict control and reduction of emissions based on internal rules.

### Compliance with Environmental Legislation

We make efforts toward environmental conservation by conducting business based on environmental laws and regulations as well as local ordinances and agreements with local governments. In FY2020, we received no administrative penalties under this legislation.

### Consideration of Environments Surrounding Power Plants

In accordance with the Environmental Impact Assessment Act in Japan, we conduct environmental impact assessments of the environments surrounding power plants during installation, replacement, or other work on the plants as well as after operation starts, and explain the results and engage in dialogue with members of local governments and communities. We use the results of these environmental impact assessments to consider the impact of our work on surrounding environments, and make conservation efforts accordingly, including measures against noise, vibrations, and industrial waste, and measures to preserve scenery.

### **Primary Measures**

Measures	Description	
Measures against noise and vibrations	Our measures against noise and vibrations include choosing proper placement of buildings and equipment, adoption of equipment for lowering noise/vibration, and installation of silencers/sound barriers.	
Measures against industrial waste	We take steps to properly treat waste by creating manuals tailored to the operations of individual thermal power plants.	
Measures for landscape preservation	We make efforts to ensure that power plants blend in with local scenery, while considering costs. See p. 54	

## **TOPICS** Preserving Biodiversity

The environmental impact assessment we conducted when replacing Units 1 and 2 at Yokosuka Thermal Power Station confirmed that the area was home to falcons, an endangered species in Japan.

In response, we undertook measures such as using low-noise, low-vibration machinery to avoid negatively impacting the falcons' breeding environment. We also installed nesting boxes on the new stacks to create an environment in which the falcons can build nests. In the future, we intend to install green spaces with hunting grounds for the falcons and take other steps to conserve their habitat.



A falcon observed on the power plant property

https://www.jera.co.jp/business/thermal-power/environment/waste/maintenance Only Japanese text

Financial and Corporate

Information

E: Environment

### Environment

### Environmental Data

Item*1	Unit	FY2018*2	FY2019	FY2020
Fuel consumption for power generation				
Coal	million t	16.26	14.83	13.07
Petroleum	million kL	0.54	0.37	0.02
LNG, LPG, utility gas	million t	33.10	31.21	27.40
Biomass	thousand t	190	390	390
Sending-end power	billion kWh	283.4	265.3	244.6
Gas sales volume	million t	2.66	3.06	3.12
Total energy consumption (crude oil equivalent)	million kL	59.68	55.25	50.70
Total thermal power generation efficiency (low heating value)	%	49.7	50.1	49.7
Thermal Power Generation Efficiency Benchmark Index A*3 (Act on the Rational Use of Energy)	_	0.994	1.002	1.000
Thermal Power Generation Efficiency Benchmark Index B*3 (Act on the Rational Use of Energy)	%	46.3	46.8	46.8
Electric power consumption at offices, etc.	million kWh	11.60	10.92	9.51
Intensity of energy consumption at offices, etc.	MJ/m <sup>2</sup>	25.87	16.86	14.37
Industrial water intake	million m <sup>3</sup>	19.08	18.12	17.71
Tap water intake	thousand m <sup>3</sup>	390	870	810
Groundwater usage	thousand m <sup>3</sup>	20	20	180
Greenhouse gas (GHG) emissions associated with power generation business (Scope 1)	thousand $t$ -CO <sub>2</sub>	134,908	124,63 0	114,950
CO <sub>2</sub> emissions	thousand t-CO2	134,850	124,500	114,830
CH <sub>4</sub> (methane) emissions	thousand t-CO <sub>2</sub>	—	10	10
N2O (nitrous oxide) emissions	thousand t-CO <sub>2</sub>	120	110	100
SF6 (sulfur hexafluoride) emissions*4	thousand t-CO $_{\rm 2}$	7	4	6
HFC (alternative CFC) emissions*4	thousand t-CO2	0.3	0.6	0.4
$\begin{array}{l} \text{Domestic/JERA Group} \\ \text{CO}_2 \text{ emissions associated with power generation business} \\ (\text{Scope 1})^{*5} \end{array}$	thousand t-CO <sub>2</sub>	148,620	139,010	127,440
Global/JERA Group $CO_2$ emissions associated with power generation business (Scope 1)* $^{\rm 5,6}$	thousand $t$ -CO $_2$	166,300	161,110	147,920
$CO_2$ emissions associated with fuel upstream business (Scope 1)^{\ast 5.6}	thousand t-CO2	150	240	350
$CO_2$ emissions associated with fuel transportation business (Scope 1)^{\star 5.6}	thousand t-CO $_{\rm 2}$	200	300	330
$\ensuremath{\text{CO}_2}$ emissions from power consumption in buildings associated with business activities (Scope 2)	thousand t-CO $_{\rm 2}$	5	5	4

\*1 Figures for JERA in Japan only and Hitachinaka Generation Co., Inc. unless otherwise noted

\*2 Figures for FY2017 and FY2018 (before the consolidation of existing thermal power businesses) calculated based on totals of all JERA facilities as of April 1, 2019 \*3 Figures for JERA in Japan only.

\*4 Calendar year totals

\*5 Joint venture figures calculated based on JERA's share

\*6 As a rule, totals for overseas businesses are based on local fiscal years and reporting standards \*7 Figures based on sending-end power

Item*1	Unit	FY2018*2	FY2019	FY2020
Other indirect CO <sub>2</sub> emissions (Scope 3)	thousand t-CO <sub>2</sub>	25,490	23,910	20,680
Purchased goods and services	thousand $t$ -CO <sub>2</sub>	0.08	0.07	0.04
Capital goods	thousand $t-CO_2$	580	770	710
Activities related to fuel and energy	thousand t-CO <sub>2</sub>	24,700	22,970	19,800
Fuel transportation and circulation in upstream departments	thousand t-CO <sub>2</sub>	_	_	-
Waste generated by business	thousand t-CO <sub>2</sub>	210	160	170
Business travel	thousand t-CO2	0.6	0.6	0.6
Employee commuting	thousand t-CO2	1	1	1
Lease assets of upstream departments	thousand t-CO2	_	—	-
Fuel transportation and circulation in downstream departments	thousand t-CO2	_	_	-
Processing of sold products	thousand t-CO2	—	_	_
Use of sold products	thousand t-CO2	_	_	_
Treatment after disposal of sold products	thousand t-CO2	_	_	_
Lease assets of downstream departments	thousand t-CO2	_	_	_
Franchise	thousand t-CO2	_	_	-
Investment	thousand t-CO2	—	_	—
$\text{CO}_2$ emission intensity of power generation*7	kg-CO <sub>2</sub> /kWh	0.476	0.469	0.469
Domestic/JERA Group: $CO_2$ emission intensity of power generation business*5.7	kg-CO2/kWh	0.493	0.492	0.491
Global/JERA Group: $CO_2$ emission intensity of power generation business <sup>*5,6,7</sup>	kg-CO <sub>2</sub> /kWh	0.499	0.496	0.493
SF6 (sulfur hexafluoride) capture rate (during inspections)	%	99.7	99.8	99.9
SF6 (sulfur hexafluoride) capture ate (during removal)	%	100.0	100.0	99.4
SOx (sulfur oxide) emissions	thousand t	9.24	7.50	5.09
SOx (sulfur oxide) emission intensity*7	g/kWh	0.03	0.03	0.02
NOx (nitrogen oxide) emissions	thousand t	23.2	21.1	17.8
NOx (nitrogen oxide) emission intensity*7	g/kWh	0.08	0.08	0.07
Gross wastewater volume	million m <sup>3</sup>	7	7.6	7.51
COD (chemical oxygen demand) emissions	t	20	21	20
Industrial waste and byproducts generated	million t	2.39	1.99	2.04
Disposal by reclamation	thousand t	20	10	10
Coal ash effective utilization rate	%	99.98	99.99	99.99
Number of severe leaks	cases	0	0	0
PCB (polychlorinated biphenyl) content Number of transformers and capacitors disposed of	units	111	16	57
Volume of PCB-contaminated insulating oil treated	kL	124	86	510
Cases involving fines and sanctions for violations of environmental laws and regulations	cases	0	0	0

growth through constant incorporation

of new skills and knowledge avidly

S: Human Resources

**Entrepreneurial** 

Adeptly perceiving changes, seeking

opportunities, and continuously

**Spirit** 

innovating

## **Human Resources**



### JERA's Ideal Employees



Striving for organizational and personal growth based on respect for formation of views and diversity such as differences in gender, nationality, ethnicity, experience, expertise, etc. regardless of rank or position.

### Priority Initiatives Related to Human Resources

Enhancement of elective training, rank-based training, and selection training

#### Corporate culture Personnel system (salary/evaluations/promotions) Management training for managers Personnel system (salary/evaluations/salary increases) Internal communication (consciousness reform) Personnel system based on meritocracy Employees Diversity and inclusion and families **Career development** Working styles and employee welfare Introduction of independent career-formation mechanism Expansion of telework • Implementation of career path guidance/career development consultations

• Opened satellite offices (the greater Tokyo area, Nagoya)

φ

Fairness

Being accountable and taking the

initiative with a heightened sense

of ethics and fairness in all matters

• Enhancement of employee welfare (leave, allowances, etc.)

### Issue Awareness

Companies are expected to increase the labor participation rate through developing a work environment in which diverse human resources can flourish and establishing systems for flexible working styles. Further, as companies become increasingly global, premised on respect for the diverse cultures, customs, and histories, etc. of each country and region, JERA recognizes it as a duty of a company to maintain work environments that protect health and safety, and to provide employees with fair employment and promotions as well as impartial treatment and evaluations. JERA positions its human resources as the vital source of the Group's capacity for growth, and we will promote a variety of measures based on priority human resource initiatives.

### Message from the Senior Operating Officer

Introduction of an internal recruitment system

The vital source of our capacity for growth-needed to achieve our "Mission and Vision"-is none other than our "human resources." Positioning our "corporate culture," "career development," "working styles/employee welfare," and our "personnel system" as priority human resource initiatives, it is our desire to realize "the happiness of our employees and their families." Under the principle of diversity and inclusion, we are creating organizations that respect everyone's diversity and individuality to enable them to succeed in fair, equitable environments, Additionally, we have been rolling out a mechanism for independent career formation in which employees establish their own career goals and are provided with support in building their skills and abilities through career path guidance and various forms of training. Through "JERA Work Design," an initiative for designing a diverse array of working styles, we are promoting a variety of measures and are also aiming to enhance the work-life balance of our diverse human resources even as they fully exercise their capabilities. At the same time, we are enhancing systems that support these initiatives, and we will be moving forward with initiatives that will support JERA's sustainable growth through the growth of our employees.



Senior Managing Executive Officer Chief Operating Officer, Business Support & Solutions Department

### Masahiro Takizawa

Creation: ESG S: Diversity and Inclusion

Foundation for Value

## **Diversity and Inclusion**

### **Top Commitment**

JERA perceives the promotion of diversity and inclusion as central to its strategy for realizing its mission. JERA will aim to be an organization rich in "Diversity" as seen from a variety of perspectives, including gender, nationality, race and ethnicity, sexual orientation, experience, and expertise. Further, JERA will achieve "Inclusion" in which a diverse array of people can respect each other, exercise their abilities to full effect, contribute to the organization, and realize personal growth in fair, equitable environments.

### Our vision for diversity and inclusion is summarized into two core beliefs below:

- The company must do everything possible to help all employees to feel happy, motivated, and fulfilled at JERA, to the benefit of themselves, their partners, families, and communities.
- Our "Vision and Mission for Diversity and Inclusion" can only be achieved by happy, motivated and fulfilled employees.

Specifically, we are working to achieve the following four aims:

- 1. Prioritize professional development and career opportunities for current and future employees.
- 2. Use our employees' skills to tear down barriers to building a next generation energy business.
- 3. Develop new sustainable global energy solutions for future generations.
- 4. Be recognized for our achievements by external stakeholders, locally and globally.

We will build a happy, motivated, and fulfilling company capable of delivering exciting new solutions to the world in which we live.

### Diversity and Inclusion Promotion Strategy

### Increasing the Percentage of Women in Leadership Positions

Leveraging diverse values and fundamentally adhering in a thorough manner to the principle of fairness, we are focusing on gender diversity, one of the most impactful of the various aspects of diversity. By establishing numerical targets and proactively providing women employees with opportunities, we aim to increase the percentage of women in leadership positions.

https://www.jera.co.jp/english/corporate/diversity

**Diversity and Inclusion** 

WEB



Percentage of

#### Board members: Officers under the Companies Act in Japan

### Overview of Diversity and Inclusion Promotion Strategy

Our Diversity and Inclusion Section, which was established in April 2020, is rolling out a variety of measures to realize our vision for promoting diversity and inclusion.

Through respect for diversity and communication on an equal footing, our employees will share a common vector of creating new value. This will also foster an inclusive and fair corporate culture in which everyone can expect to receive opportunities, experience individual growth, and contribute.

	Measures	Description
	D and I Month	<ul> <li>Held workshops and events online for all employees in March 2021</li> <li>A total of about 550 employees participated in the workshops "Lessons from Leading Companies to Promote Women's Activities" and "Lessons on D and I from Global Companies and Groups," as well as a <i>senryu</i> (traditional Japanese humorous poem) competition.</li> </ul>
Formation of an inclusive organization	Diversity management training	Held training for managers on topics such as unconscious biases and inclusive leadership
organization	Implementation of e-learning	<ul> <li>Held e-learning to promote the use of childcare leave among male employees as well as to foster a culture of mutual recognition of a variety of working styles; about 3,800 employees participated</li> </ul>
	Employee attitude surveys	<ul> <li>Conducted employee awareness surveys in order to ascertain the level of understanding of D and I and to link it to improvements and measures.</li> </ul>
Gender diversity	Supported career development in order to increase the percentage of women in leadership positions	<ul> <li>Provided support for women in manager positions, including assigning sponsors, career development awareness instillation, acquisition of opportunities, and network building</li> <li>Conducted training to foster awareness of career development</li> </ul>
initiatives	External network building and collaboration	<ul> <li>Participation in "EMPOWER" (an alliance of companies from different countries launched on the basis of the G20 summit declaration in June 2019, with the aim of increasing women's involvement in decision-making positions at companies)</li> <li>Endorsed the "Keidanren (Japan Business Federation) Challenge Initiatives for 30% of Executives to be Women by 2030"</li> </ul>

**TOPICS** Establishment of a New Company, JERA Miraiful

In April 2021, JERA established JERA Miraiful Co., Ltd., a new company to provide increased work opportunities for people with disabilities. The objective of JERA Miraiful is to create employment opportunities that promote the independence of and participation in society by people with disabilities, for whom employment opportunities remain limited. With a planned start of business in April 2022, JERA Miraiful will establish its main business bases in the cities of Yokohama and Nagoya and will be commissioned by JERA to do business such as uniform management, gardening (flower and strawberry cultivation, flower bed management), and administrative support.



The corporate logo of JERA Miraiful represents our wish to be a company where everyone can work actively and with a smile.

Creation: ESG S: Human Resource Development

Foundation for Value

## **Human Resource Development**

(Formulated in March 2020)

### Human Resource Development Policy

JERA considers each and every employee to be an important asset and will engage in human resource development in accordance with the following approach.

### [Objectives of Human Resource Development]

- Employees continuously pursue personal growth and live energetically throughout their lives
- Phrough employee growth, enhance JERA's corporate value and achieve our "Mission and Vision"

### [Basic Approach]

JERA respects the diversity of its human resources and supports its employees in their aims to become professionals in all areas of expertise

 Helping JERA employees improve their skills and develop a mindset for sustained success and dominance inside and outside Japan as well as contributing to social progress

### JERA provides opportunities for taking on new challenges in order to stay ahead of the times

- Developing people who adeptly innovate in unpredictable times
- · Helping employees make bold attempts to achieve further growth and find places to exhibit their skills

### JERA respects employees' career plans and provides maximum support for their realization

• Deploying a rotation and helping employees improve their skills toward achieving their career goals

We proactively support the growth of all JERA Group employees, including those at overseas sites

### Human Resource Development Plan

We are establishing mechanisms that provide strategic support for employee growth through independent career development, professional development, and more based on the Human Resource Development Policy we formulated in March 2020. To establish supportive environments for employees' self-realization, we have created mechanisms for career development to build their own careers, a training system providing multifaceted support for skill development to realize that career development, and an internal recruitment system to support employees in taking on new challenges to diversify their careers.

We continue to be proactive in improving systems and providing opportunities for each and every JERA employee to exhibit their skills to the fullest in pursuit of corporate and individual growth.

**Overview of Independent Career Development** 



Training System



Professional training: Department-specific skills training aimed at fostering the demonstration of common skills required for departments, as well as cutting-edge solutions and high-level specialized expertise and skills planned for each department.
 General training: Various elective training programs and position-based training programs, etc. planned by the Human Resources

General training: Various elective training programs and position-based training programs, etc. planned by the Human Resources Development General Management Department.

Creation: ESG S: Work Style Reform

Foundation for Value

# Work Style Reform: JERA Work Design

### Promotion of "JERA Work Design"

In April 2021, approximately 90% of the employees seconded to us from TEPCO Fuel & Power, Inc. and Chubu Electric Power Co., Inc. transferred into JERA. As we fulfill our social mission as an essential operator amid the massive changes in the energy business environment, we will enhance our corporate value and, at the same time, increase the happiness of our employees and their families. To this end, we will design various ways of working through both hard and soft measures with a well-balanced combination of office work and remote work to enable diverse human resources to make the most of their abilities.

### Three Measures



Flexibly combining office work and remote work
 Easing the requirements for acquiring remote work to realize more flexible working styles
 Standardization of business processes for remote work

 Realizing efficient business operations and appropriate labor management through means such as standardizing business processes, promoting visualization, and creating online meeting guidelines

Skill improvement system for employees through remote capabilities

Improving an online training system to support employees' independent career
development



**Designing workplaces** 

that support diverse

working styles and help

generate innovation

## Utilizing sat or commut Creation of

Establishment of satellite offices

 Utilizing satellite offices to reduce the burden of employees who live away from their families or commute long distances (began trial operation of Yokohama Satellite Office in July 2021)

Creation of workplaces premised on remote work
Promoting free-address offices for efficient office utilization
Creating innovation through promoting encounters between employees via layout changes

**B** Designing an open corporate culture that allows for diverse working styles

### D and I instillation

Planning and implementing online events that make it easy for employees to participate
Fostering a corporate culture that is inclusive and open through group work and opinion exchange

Management support for promoting diverse working styles
 Implementing manager training concerning work management for remote work
 Developing communication tools using digital technology



## Promoting Work–Life Balance

In February 2020, we enacted a full-scale teleworking system with no restrictions to enable workers to enjoy flexible work styles as a part of promoting work–life balance. We have also established a system for supporting childcare such as life support leave to encourage not only women, but also men to participate in childcare, thereby embracing a work style that enables a diverse array of human resources to flourish. We continue to diversify work styles while incorporating the opinions of our employees.

### Various Systems for Achieving Work-Life Balance

System	Description and Results
Teleworking System	<ul> <li>Trials began in February 2019, and full-scale operation started in February 2020 (working from home or satellite offices)</li> <li>Employees are free to telework on days of their choice without any restrictions on the purpose (up to twice per week or eight times per month)</li> </ul>
Life Support Leave	<ul> <li>Introduced for all employees for helping personnel involved in childcare achieve balance between work and family</li> </ul>
Days for No Overtime Work at Headquarters	<ul> <li>An initiative to reduce overtime working hours</li> <li>Applied on the second Friday of each month</li> </ul>

## TOPICS Family-Friendly Boss Declaration

In order to enable human resources who possess a diverse array of values to fully demonstrate their capabilities, it is necessary to build a corporate culture that



is open and in which diverse working styles are mutually accepted.

Aiming to build a culture in which male employees can also take childcare leave without hesitation and in which all employees can be active in their own way, we have released a "family-friendly boss declaration." (The declaration is available [we apologize, but only in Japanese] on the Ministry of Health, Labour and Welfare's Ikumen Project website.)

WEB JERA Work Design We started bringing the initiatives of JER/

We started bringing the initiatives of JERA Work Design up to full speed in FY2021. https://www.jera.co.jp/english/corporate/workstyle/

(Formulated in March 2021)

Creation: ESG S: Health and Safety

Foundation for Value

# **Safety and Health**



### [Safety Philosophy]

### Safety is the foundation of our business and the source of our corporate value. We give the highest priority to safety in all our business activities.

The Mission of the JERA Group is to provide cutting-edge solutions to the world's energy issues. To fulfill this mission, it is essential to conduct our business activities safely and supply energy in a stable manner.

To that end, the JERA Group will develop its business activities based on the premise of "Safety First" in its entire supply chain from fuel upstream investment and procurement to sales and will work on further safety measures to ensure that everyone in society can have peace of mind.

### [Safety Policies]

Based on the Safety Philosophy, the JERA Group will work on the following policies:

- Create a safe and comfortable work environment.
- 2 Observe safe and appropriate operating procedures and rules.
- 3 Design, operate and maintain facilities with safety in mind.

### [Principles of Conduct]

To realize our safety philosophy and policies, each and every employee will act in accordance with the following principles of conduct:

- Work together across organizations and responsibilities to ensure safety.
- 2 Adopt the safer decision when in doubt.
- Continue constant efforts and initiatives to ensure safety.

### Issue Awareness

In accordance with matters such as frequently occurring natural disasters, changes in the international energy situation, and changes in the environment of power provision, it is necessary that we ensure a strong and sustainable power supply system. Particularly in recent years, earthquakes and other natural disasters have occurred frequently, become more severe, and have affected much larger areas, necessitating that we improve our disaster resilience.

As a company responsible for a significant portion of the stable supply of energy vital to the people of Japan, we are committed to safety management at our facilities and take extensive disaster prevention measures. Additionally, we will improve health control based on the awareness that ensuring the health and safety of our employees is the foundation of business operation.

### Fostering Safety Awareness

Our thermal power generation facilities and fuel facilities contain many pieces of machinery and equipment, and the potential danger of each must be understood and safety measures must be taken in daily patrols, facility maintenance, and other work around them. Based on a safety activity plan formulated each year, we develop safety activities in unison with affiliates and contractors. In particular, for our employees who work at our facilities, we hold "danger simulation training" to enhance their sensitivity to potential dangers. We also share safety information on-site, conduct patrols, and hold study sessions for employees to work in conditions where safety is assured. Going forward, we will once again share our newly formulated Safety Philosophy and Safety Policies with Group companies, cooperative companies, and contractors, and strive to further foster safety awareness.

Main Achievements of Safety Activities in FY2020

<b>Priority Action Item</b>	Main Achievements
Implementation of various safety measures	<ul> <li>Sharing and horizontal deployment of disaster cases, disaster information, and positive examples</li> <li>Review of safety award system</li> </ul>
Strengthening of the safety management system to foster a safe culture	<ul> <li>Established a safety review project to strengthen the safety management system</li> <li>Established Safety and Disaster Prevention Unit, General Affairs Group (October 2020)</li> <li>Formulated Safety Philosophy and Safety Policies (March 2021)</li> </ul>
Implementation of safety management aimed at improving safety quality	<ul> <li>Implemented accurate checks and reviews based on management system</li> <li>Implemented safety management in collaboration with subsidiaries and affiliates</li> <li>Examined safety management methods for expatriates and overseas travelers</li> </ul>
Implementation of safety activities in collaboration with nationwide activities	<ul> <li>Implemented a period of enhanced safety activities in line with National Occupational Safety Week in the summer</li> <li>Implemented the Winter Safety Campaign in conjunction with the year-end and New Year's Zero Accident Campaign</li> </ul>

Financial and Corporate

S: Health and Safety

### **Safety and Health**

### Promoting Health Management

Based on the awareness that "health and safety are the foundation of our business operations," we have established a health and safety management system under the responsibility of the president in order to promote health and safety activities as a priority management issue. Safety and Health Committees established at each business site and led by the Health Management Office work in cooperation with industrial physicians, public health nurses, health insurance unions, and labor unions to formulate an annual health and safety activity plan and promote initiatives aimed at maintaining and improving the health of employees.

In FY2020, we focused on measures aimed at reducing mentalhealth problems and lifestyle-related diseases resulting from the increase in working from home. Going forward, we will continue working to build workplace environments that are safe and easy to work in. We will do this by strengthening cooperation between workplaces and industrial health staff, improving mechanisms supporting both the early detection and treatment and prevention of illnesses, and promoting a variety of related measures.

### Main Achievements of Health and Safety Activities in FY2020

<b>Priority Action Item</b>	Main Achievements
Compliance with laws and ordinances on health and safety	<ul> <li>100% regular medical examination reception rate</li> <li>Implemented medical examinations by occupation</li> <li>Completed response to the revised Health Promotion Act of Japan on measures against second-hand smoke</li> <li>Provided smoking cessation support, including treatment guidance and provision of information for employees wishing to quit smoking</li> </ul>
Mental health measures	<ul> <li>Implemented mental health care training for managers and interviews with industrial health staff by physicians and clinical psychologists</li> <li>Conducted self-care training for general workers</li> <li>Stress check reception rate: 97.0% (FY2019: 94.8%)</li> <li>Recommended interviews with industrial physicians and external consultations for highly stressed individuals</li> </ul>
Measures to prevent health problems caused by overwork, etc.	<ul> <li>Implemented industrial physician interviews for individuals working extensive hours</li> <li>Sent out reminder emails to employees who work long overtime hours and their superiors</li> </ul>
Measures to prevent the onset of lifestyle-related diseases, etc.	<ul> <li>Enhanced measures after medical examinations, including for expatriate employees</li> <li>Held health and safety lectures at monthly Safety and Health Committee meetings and issued a newsletter over the company intranet</li> </ul>

Diagram of Health and Safety Management System (as of August 31, 2021)



### Safe and Stable Operations

We expend every effort to ensure the safe and stable operation of our thermal power plants by monitoring their operation status 24 hours a day from a central control room. We conduct daily inspections to swiftly discover any abnormalities, rigorously inspecting the external appearance of our facilities and checking each piece of equipment to ensure that we catch even the slightest changes in temperature, vibrations, abnormal noises, and other problems.

We also conduct periodic operator inspections as required by the Electricity Business Act of Japan, our own periodic voluntary inspections, and other periodic inspections appropriately so that our facilities can be operated safely. We have systems in place for the soonest possible restoration of operations together with affiliates in the unlikely event of a problem occurring during operation.

### Safety Management and Disaster Prevention Measures

Our thermal power plants handle a great deal of dangerous substances, and we are appropriately managing them in accordance with relevant laws and regulations such as the Fire Service Act of Japan, the Act on the Prevention of Disaster in



Petroleum Industrial Complexes and Other Petroleum Facilities, and the High Pressure Gas Safety Act of Japan. In particular, for thermal power plants located in special disaster prevention zones such as petrochemical complexes, JERA is taking measures in accordance with the scale of the plant.

WEB Main safety management and disaster prevention measures

https://www.jera.co.jp/english/corporate/safety/prevention

### Earthquake Countermeasures

When constructing thermal power plants, we design them to be earthquake-resistant in accordance with the Building Standards Act of Japan, the Fire Service Act of Japan, and other relevant regulations, as well as the Rules of Quality Assurance for the Safety of Thermal Power Plants (Japan Electric Association Code, JEAC), and confirm seismic performance through periodic facility inspections after construction. We also implement individual measures as needed in light of facility damage caused by past earthquakes.

Additionally, for earthquakes announced by public organizations like the National Disaster Management Council, we evaluate the seismic resistance of important facilities at each power plant and implement measures such as seismic reinforcement to avoid long-term shutdowns due to collapse or earthquake damage. In the future, when new knowledge is obtained, such as the announcement of new seismic assumptions, we will examine the validity of the existing earthquake countermeasures and consider necessary measures.

**WEB** Examples of individual measures reflecting facility damage caused by past earthquakes, and main facilities with seismic reinforcement

https://www.jera.co.jp/english/corporate/safety/earthquake

### Safety Measures for LNG Receiving Terminals

At our LNG receiving terminals, in preparation for the unlikely event of an LNG leakage, safety measures are being implemented based on the following three concepts: "(1) leakage prevention," "(2) early detection of leakage," and "(3) preventing leakage from spreading." We also make considerations for the handling of fire, for example adopting explosion-proof structures for electrical equipment surrounding LNG facilities and restricting the use of products that may cause fire by designating control zones (including special control zones).

We have been operating safely for over 40 years since the introduction of LNG. We strive to further strengthen our safety measures and take all possible measures in our operation.

Creation: ESG S: Coexisting with Local Communities

Foundation for Value

## **Coexisting with Local Communities**



July 2021, Formulated our "Social Contribution Activity Policy"

Providing medical supplies in Bangladesh

### Issue Awareness

In addition to such global issues as climate change, countries and regions are facing increasingly severe endemic issues, including poverty and disparity, resource problems, and demographic changes. Against this backdrop, there is an expectation for companies to proactively involve themselves in grappling with these regional and community issues.

As a company engaged in business on a global level, we contribute to the economic and social development of regions and communities. We do this by gaining a firm understanding of the problems faced by regions and communities and working with a variety of stakeholders to implement social contribution activities leveraging our strengths.

**Social Contribution Activity Policy** 

(Formulated in July 2021)

### **Basic Policy**

In conducting global business, in addition to its business activities, the JERA Group aims to proactively engage in social contribution activities, to build strong relationships of trust with regional communities and other stakeholders, and to achieve sustainable development together with local communities.

In implementing social contribution activities, we will respect the cultures, customs, nature, history, and other characteristics of individual countries and regions. At the same time, we will contribute to society and community development through activities leveraging the strengths of the entire JERA Group.

### Purpose of Activities

The purpose of our social contribution activities is the continuous creation of a virtuous cycle in which those relationships of trust lead to enhanced corporate value by contributing to the realization of a sustainable society through the building of relationships of trust with stakeholders.

### Priority Areas for Activities

Aiming to realize a sustainable society, we will engage in activities giving priority to the three areas of "coexistence with the environment," "education for the next generation," and "the resolution of local community issues."

### 1 Coexistence with the Environment

We will contribute to better conservation of the global environment by working to reduce the environmental burden of our business activities together with measures such as promoting greening and environmental protection.

### 2 Education for the Next Generation

We will pass on the skills and expertise we have cultivated through our business operations to the next generation and contribute to the education of human resources who will shoulder the future of energy so that they can flourish on a global scale.

### 3 Resolution of Local Community Issues

We will contribute to the resolution of the diverse array of issues faced by the countries and regions we do business in, including increasing disaster preparedness, creating jobs, and eliminating unelectrified communities.

### Support for Employee Social Contribution Activities

We will provide our employees with opportunities for social participation, and support employees' voluntary social contribution activities.

### Collaboration with Stakeholders

We will aim to engage in communication with stakeholders and collaborate with them to engage in a diverse array of social issues.

### Information Disclosure

We will proactively disseminate information on our basic policy for social contribution activities as well as the content of the social contribution activities we conduct via our website and reports.

S: Coexisting with Local Communities

Foundation for Value

### **Coexisting with Local Communities**

### Coexisting with the Environment

Environmental Conservation and Scenery Preservation Measures at Thermal Power Plants

The thermal power plants we own throughout Japan implement measures to preserve the landscape in consideration of the impact of operations on the surrounding environment. We have implemented landscape



Yokohama Thermal Power Station

simulations for the chimneys and the main building and selected the shape and color. We are also actively involved in greening and are preserving the environment by planting trees at power plant premises, etc., to harmonize with nature. These premises have now become forests home to many rare insects and other species.

### **Cleanup and Environmental Beautification Activities**

JERA's thermal power plants and other places of business work together with affiliates and local governments to proactively participate in cleanup and environmental beautification activities in the surrounding communities. In spite of restrictions during the COVID-19 pandemic, in FY2020, 360 employees participated in environmental beautification activities.

## TOPICS Beach Cleanup Activity

In April 2021, we conducted a beach cleanup activity in Akita Prefecture. JERA employees worked with local residents and staff as well as players from "Prestige International Aranmare\*," a



women's basketball team based in Akita City, Akita Prefecture.

\*Aranmare: A women's basketball team established in 2015. Starting in the 2021–2022 season, the team will be participating in the premier W League, a first for a team from the Tohoku region (team management: Prestige International Inc.). JERA concluded an agreement in March 2021 to be a uniform partner for three seasons starting in the 2021–2022 season.

### Education for the Next Generation

### Establishment of a Scholarship Program

In December 2020, JERA established the "JERA Asia Scholarship program" for international students from Asian countries to study at Japanese universities and graduate schools. By providing financial assistance for international students studying in Japan, this scholarship program aims to support the development of talented people who will contribute to the future economic development of Asian countries.

In FY2020, the scholarships were provided to students from various Asian countries studying at the International University of Japan, which has engaged in the education of global human resources for many years.

### **Power Plant Tours**

In FY2020, we suspended reception of power plant tours in order to prevent the spread of COVID-19. From September 2020, however, we held online tours of the Kawasaki Thermal Power Station. Enabling people to view the power plant from their own homes without being physically present made it possible even for people living far from the plant to take part, and the tours were well-received. For our tour course for elementary school pupils and parents participating together, we worked to enhance the content so that parents and

children could have fun learning together, including providing content teaching about electricity as used in daily life, experiments, and quizzes.



WEB Public relations and JERA's "Denryoku Kan" (Museums of Electricity) https://www.jera.co.jp/corporate/pr Only Japanese text

### WEB Power plant tour information

https://www.jera.co.jp/node/17 Only Japanese text

### Resolution of Local Community Issues

Donations to Atsuma Town via Corporate Hometown Tax

Sharing in a belief in regional disaster prevention through the local production of power held by the town of Atsuma in Yufutsu District, Hokkaido, in March 2021, JERA donated, through the corporate version of the Hometown Tax system, 740 million yen to a "local production for local protection" sixth-order industry energy project\* in Atsuma.

\*The project aims to promote local energy production for local consumption and to utilize locally produced energy for local disaster management by installing renewable energy power generation equipment and storage batteries in public facilities and by practicing energy management.

### **Providing Medical Supplies in Bangladesh**

We have contributed to sustainable economic development in Bangladesh by developing new gas-fired power generation business and investing in Summit Power International Limited ("Summit Power"), the country's largest independent power producer (IPP).

Like other countries, Bangladesh experienced a shortage of medical supplies due to the spread of COVID-19 throughout the world. In response, we began providing medical supplies free of charge in July 2020. To date we have provided ambulances, artificial respirators, and personal protective gear including protective suits and masks.

## Overseas/Affiliate Initiatives and Contributions to the SDGs

We invested in TeaM Energy Corporation, an affiliate in the Philippines (JERA and Marubeni each have a 50% stake). TeaM Energy has developed various initiatives over many years to contribute to the resolution of social issues in the Philippines through the non-profit TeaM Energy Foundation Inc. These include resolving the problem of poverty through the electrification of homes and unelectrified communities; protecting the environment; and support for education, medicine, and drug eradication.

Creation: ESG S: Stakeholder Engagement

Foundation for Value

## **Stakeholder Engagement**



Main Ctalishelds	Domondo and Everatetions	lettiet	Dooute
Main Stakeholders	Demands and Expectations	Initiatives	Results
	<ul> <li>Stable supply of electricity</li> <li>Energy supply in pursuit of customer satisfaction</li> <li>Decarbonization and expansion of renewable energy</li> <li>Promotion of ESG initiatives</li> </ul>	We provide a stable supply of energy to customers throughout the world using value chains from fuel procurement to power generation and electricity and gas sales based on our mission to provide cutting-edge solutions to the world's energy issues. We also establish strong, trust-based relationships by continuing to respond to customer expectations on a foundation of ESG- conscious business management.	<ul><li> Operating activities</li><li> Website</li></ul>
Business partners	<ul> <li>Fair and equitable trade</li> <li>Strengthening of collaboration</li> </ul>	We promote CSR-conscious procurement activities in an effort to fulfill our social responsibilities and engage in fair and equitable trade with our suppliers. We also promote mutual diligence and maintain close communication with our suppliers and partners toward our mutual development.	<ul> <li>Procurement policy briefings</li> <li>Collaboration with other companies in domestic and global businesses</li> <li>Joining organizations such as "the Ocean Renewable Energy Action Coalition"</li> </ul>
Local communities	<ul> <li>Environmentally conscious business management</li> <li>Consideration of the human rights of local community members</li> <li>Contribution to local economies</li> <li>Local job creation and skill development</li> </ul>	We proactively engage in dialogue with people in local communities where our power stations are located and establish strong, trust-based relationships in an effort to continuously develop alongside each other. We also work for the development of society through social contribution activities tailored to local communities and business activities that respect the nature, history, culture, and customs of each and every country and region in which we conduct business.	<ul> <li>Power station tours</li> <li>Participation in local community events</li> <li>Provision of medical supplies outside Japan</li> </ul>
Shareholders and investors	<ul> <li>Enhancement of corporate value</li> <li>Strengthening of earning power</li> </ul>	We disclose financial and non-financial information and engage in dialogue with our shareholders and investors in an effort to further understanding and improve our corporate value to respond to their expectations.	<ul><li>Shareholders meetings</li><li>IR briefings</li></ul>
Employees	<ul> <li>Securing and developing global, strategic human resources</li> <li>Management of employee health and workplace safety and sanitation</li> <li>Respect for diversity</li> <li>Promotion of work-life balance</li> <li>Elimination of discrimination and harassment</li> <li>Improvement of reporting system effectiveness</li> </ul>	We seek to ensure the health and safety of our employees and create comfortable, positive working environments on a foundation of respect for human rights. Additionally, to enable our diverse human resources to fully exhibit their skills, we intend to maintain our system that enables them to choose their own career paths and work styles. In addition, we proactively move forward with various measures including hiring global human resources and promote active participation by women and the employment of people with disabilities.	<ul> <li>Creation of inclusive organizations</li> <li>Support for independent career development</li> <li>Promotion of work styles tailored to diverse needs</li> <li>Employee satisfaction surveys</li> </ul>

## **Basic Approach**

JERA conducts business activities amid its involvement with its stakeholders, which include customers, business partners, local communities, shareholders, investors, and others. We fully understand the social responsibility to fulfill the demands and expectations of our stakeholders, and strive for active communication to respond to them in good faith.

We intend to continue improving our business activities and services through lively, interactive communication with our stakeholders. Furthermore, our efforts to disclose both financial and non-financial information in a timely, appropriate manner will lead to proper assessments and valuation by our stakeholders in addition to helping us achieve sustainable growth and maximize our corporate value.

Creation: ESG S: Communication with Employees

Foundation for Value

## **Communication with Employees**



### As a company that came into being from the merging of two electric power companies with different corporate cultures, our most important task is to come together as "one team" and blend

most important task is to come together as "one team" and blend together in the truest sense of the phrase so that we can maximize the synergy of our consolidation and achieve growth. We are planning and developing various programs for internal exchange in a continuous effort to further our blending and consolidation.

### Online Café

Basic Approach

In order to stimulate communication between employees even under the conditions of remote work, we hold an online cafe in which President Onoda participates (called Remote Coffee Break with the President and held twice a week for 45 minutes a session). Serving as a valuable space where communication difficulties can be shared, solutions can be suggested, and a variety of other topics can be discussed, our online cafe has also served to spur the formulation of new ideas and innovations through unstructured conversations.

### Other Initiatives to Stimulate Communication

Measure	Description	
Company Newsletter	In May 2020, we published a company newsletter titled "Things to Know About JERA." The newsletter highlighted the people and appeals of individual workplaces in an effort to improve employee motivation and help them design their career paths.	
Website for employee- initiated communication	We operate a website on which employees share information with each other. The website includes an "Everyone's a Reporter!" page for introducing events at headquarters, branch offices, and power plants in real time, a "Workplace Watch" page on which young employees at headquarters introduce their workplaces, and more.	
President's Blog	A blog regularly updated by President Onoda.	
<ul> <li>Lunch meetings between the president and young/ mid-level employees</li> <li>One Coin Café</li> <li>One Coin Bar</li> </ul>	Temporarily suspended due to COVID-19	



### A One Coin Café event in 2019

### Post Anything

Post Anything are set up to enable employees to freely and anonymously share anything—from questions and concerns to suggestions for improvement, fears and worries, and good news. The posts are reported to management and are provided to the entire company as feedback alongside action proposals from supervising divisions. In FY2020, we received 90 posts, and they resulted in answers to problems as well as improvements to dairy work.

### **Employee Satisfaction Surveys**

Since FY2019, we have conducted "employee satisfaction surveys" to gain a quantitative understanding of our employees' opinions, motivations for their work, and other information. (Since FY2020, surveys have also been given to employees seconded to Group companies.) We use the surveys to investigate three categories of employee satisfaction: "Work and Assessments," "Working Conditions and Environment," and "Loyalty to the Company." In turn, we have found that overall satisfaction points have continued to increase by one point over the previous year, and that there was great demand for improvement in how work is conducted through remote work as well as the reformation of working styles. We intend to consider courses of action for improving on the issues highlighted in these surveys, and to use the issues as fundamental data for formulating company policy and management strategies to help create more appealing workplaces and improve corporate value.

## TOPICS

## "JERA Letters" Recognized with an International ECHO Award

Our "JERA Letters" initiative has been recognized with a prestigious "International ECHO Award," an internationally known marketing commendation with a lengthy history, having been established in 1929. The initiative, in which top management (President Onoda) sends messages directly to employees and their families and receives their responses, was praised for its outstanding distinctiveness.

# Issue Awareness

A lack of internal communication can lower employee motivation, increase stress, and even decrease productivity, making it a key issue for a company to resolve.

In recent years, measures aimed at enhancing communication have become urgently needed due to such issues as the increasing diversification of working styles and the rise in remote work as a result of the effects of COVID-19.

JERA positions internal communication as an essential measure. In turn, we are planning various programs for internal exchange to further our blending and consolidation.

#### Financial and Corporate Information

# Financial and Corporate Information



# State of Operating Results, Etc.

### Business Environment and Our Response

In FY2020, in spite of the prolonged global effects of the COVID-19 pandemic, the Japanese economy experienced a slow recovery in economic activity after the lifting of the state of emergency in May 2020. From around November 2020, however, the pandemic again began to worsen and thereafter the situation remained uncertain, sometimes improving and sometimes worsening. Additionally, from the end of 2020 through the New Year period, intermittent influxes of strong cold waves, something that only occurs once every several years, put pressure on power supply and demand.

Against this backdrop, JERA strove to ensure the stable supply of power, taking measures against COVID-19 at its power plants in April 2020. These measures included measures to prevent infection and the spreading of the virus through means such as prohibiting access to control rooms other than for operators; and formulating a business continuity plan that, among other things, established a system of alternate teams prepared by experienced operators. In response to the power supplydemand strain from the end of 2020 to January of the next year, we contributed to the stabilization of Japan's electricity supply and demand through means such as optimizing inventory and implementing additional procurements to the maximum. This included securing about three million tons of LNG, a previously unprecedented amount, through spot trades starting in October 2020 and received from November 2020 to February 2021 in order to increase supply capacity as much as possible.

Additionally, amid the growing global trend toward decarbonization, we have been making efforts to reduce  $CO_2$  emissions based on our "Environmental Targets" established in April 2019. As Japan's largest power generation utility, we are in a position to actively lead the realization of a decarbonized society. In October 2020, to further accelerate our efforts to date and clarify our long-term vision for the company, we established "JERA Zero  $CO_2$  Emissions 2050." Further, in order to achieve "JERA Zero  $CO_2$  Emissions 2050" in our domestic

operations, we formulated "JERA Environmental Target 2030 for its Business in Japan," a roadmap and established new environmental targets for 2030.

In October 2020, we formulated our vision for "Digital Power Plants," which will transform thermal power plant O&M through digital technology. These digital power plants combine "Digitalization" linking data on all equipment and workers for realtime visualization and utilization with our "O&M Kaizen skills," which are constantly being upgraded, and the "Technological Capabilities" that we have cultivated to date. Through this, we are creating new value and working to improve the cost competitiveness and market responsiveness of our power generation facilities.

### State of Operating Results

We posted net sales of 2,730.1 billion yen, a 549.8 billion yen decrease from FY2019 due to a decline in retail unit prices in accordance with lowered resource prices, as well as a decrease in electricity sales. In spite of issues such as the profit and loss imbalance resulting from the COVID-19 pandemic, ordinary profit was 244.1 billion yen, a 69.7 billion yen increase from FY2019. This was a result of such factors as the results of starting year-round operation of the Freeport LNG Project and increases in subsidiary due to a strong fuel trading business. Profit attributable to owners of the parent was 157.8 billion yen, a 10.6 billion yen decrease from FY2019.

### [Fuel Business]

Profit attributable to owners of the parent was 48.0 billion yen, a 22.9 billion yen increase from FY2019. This was a result of such factors as investments in our upstream businesses in the fuel supply chain and other areas, our fuel transportation and trading businesses, the results of starting year-round operation of the Freeport LNG Project, and increases in subsidiary profit due to a strong fuel trading business.

### State of Operating Results, Etc.

### [Overseas Power Generation Business]

We posted a loss of 7.6 billion ven for profit attributable to owners of the parent, a 4.37 billion yen decrease from FY2019. This was a result of such factors as investments in power plant projects overseas, the reactionary effects of profits from selloff of overseas power generation projects recorded in FY2019, and losses from overseas power generation projects due to worsened market conditions.

### [Thermal Power and Gas Business in Japan]

We engage in the sale of power and gas in Japan, and in spite of the downturn in business resulting from the COVID-19 pandemic, profit attributable to owners of the parent was 152.8 billion yen, a 1.70 billion yen increase from FY2019. This was a result of such factors as the reactionary effects of losses associated with the selloff of LNG recorded in FY2019.

### State of Financial Condition

Total assets were 4,090.8 billion yen, a 55.5 billion yen increase from the end of FY2019. This was a result of increases in property, plant, and equipment due to the replacement of thermal power facilities in Japan.

Liabilities were 2,328.7 billion ven, a 105.2 billion ven decrease from the end of FY2019. This was a result of such factors as a decline in accrued income taxes.

Total net assets were 1,762.1 billion yen, a 160.8 billion yen increase from the end of FY2019. This was a result of such factors as the recording of profit attributable to owners of the parent.

Consequently, our equity to asset ratio was 41.2%.

### State of Cash Flows

Cash and cash equivalents on a consolidated basis at the end of FY2020 were 561.6 billion yen, a 159.2 billion yen increase from the end of FY2019.

Profit from cash flows from operating activities was 340.8 billion yen, a 210.8 billion yen decrease from FY2019. This was a result of tax payments being relatively large compared with FY2019.

Loss from cash flows from investing activities were 272.0 billion yen, a 38.7 billion yen decrease from FY2019. This was a result of such factors as a decline in losses for purchasing investment securities.

Consequently, free cash flow was 68.7 billion yen, a 172.0 billion ven decrease from FY2019.

Profit from cash flows from financing activities was 89.5 billion ven, a 541.5 billion ven increase from FY2019. This was a result of such factors as the issuance of corporate bonds and large repayments of borrowing in FY2019.

### Capital Investment

Foundation for Value

Creation: ESG

Primarily focusing on improving the efficiency of our thermal power and gas business in Japan, the basic policy of the JERA Group (JERA and its consolidated subsidiaries) is to ensure the long-term stable supply of power. The JERA Group's capital investments for FY2020 were 225.997 billion ven. By segment, investments were 1.679 billion yen for fuel business, 8.413 billion yen for overseas power generation business, 214.553 billion yen for domestic thermal power and gas business, and 1.351 billion ven for others.

### Plans for Construction of New Facilities and Facility Retirement, Etc.

Capital investment plans for the fiscal year ending March 2022 (FY2021) on a consolidated basis total 379.407 billion yen for the entire Group. On the major premise of ensuring the stable supply of power, from the perspective of thoroughly streamlining management in the mid to long term, we will strive to control the amount of capital investments in our capital investment plans.



Company	Segment	Site	Output (in thousand kW)	Start of Construction	Start of Operation	
JERA Power YOKOSUKA LLC	Thermal Power and Yokosuka er YOKOSUKA LLC Gas Business in Units No. 1, 2 650× Japan		650×2	Aug. 2019	Jun. 2023; Feb. 2024	
JERA Power ANEGASAKI LLC	Thermal Power and Gas Business in Japan	Anegasaki New Units No. 1, 2, 3	646.9×3	Feb. 2020	Feb., Apr., Aug. 2023	
Goi United Generation LLC	Thermal Power and Gas Business in Japan	Goi Units No. 1, 2, 3	780×3	Apr. 2021	Aug., Nov. 2024; Mar. 2025	
JERA Power TAKETOYO LLC	Thermal Power and Gas Business in Japan	Taketoyo Unit No. 5	1,070	Apr. 2018	May 2022	

There are no plans to retire or sell off any important facilities.

# **Consolidated Balance Sheet**

-		(Unit: Millions of yen
Assets	As of March 31, 2020	As of March 31, 2021
Current assets		
Cash and deposits	459,178	616,132
Notes and accounts receivable - trade	292,262	323,157
Inventories	175,967	154,318
Other	216,121	231,027
Total current assets	1,143,531	1,324,636
Non-current assets		
Property, plant and equipment		
Buildings and structures	359,102	348,272
Machinery, equipment and vehicles	940,670	946,642
Land	331,653	331,653
Construction in progress	348,563	374,504
Other	9,688	8,958
Total property, plant and equipment	1,989,679	2,010,030
Intangible assets		
Other	41,549	37,123
Total intangible assets	41,549	37,123
Investments and other assets		
Investment securities	613,305	559,401
Other	247,258	159,689
Total investments and other assets	860,564	719,090
Total non-current assets	2,891,792	2,766,244
Total assets	4,035,324	4,090,880

-		(Unit: Millions of yen)
labilities	As of March 31, 2020	As of March 31, 2021
Current liabilities		
Notes and accounts payable - trade	258,321	287,329
Short-term borrowings	92,391	74,553
Other	488,631	276,172
Total current liabilities	839,344	638,055
Non-current liabilities		
Long-term borrowings	1,413,565	1,498,737
Retirement benefit liability	434	472
Other	180,712	191,494
Total non-current liabilities	1,594,712	1,690,704
Total liabilities	2,434,056	2,328,760
Net assets Shareholders' equity		
Share capital	5,000	5,000
Capital surplus	1,312,517	1,312,523
Retained earnings	248,562	379,415
Total shareholders' equity	1,566,080	1,696,938
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	0	290
Deferred gains or losses on hedges	(41,505)	(4,384)
Foreign currency translation adjustment	15,947	(6,650)
Total accumulated other comprehensive income	(25,558)	(10,744)
Non-controlling interests	60,745	75,926
Total net assets	1,601,267	1,762,120
Total liabilities and net assets	4,035,324	4,090,880

# **Consolidated Statement of Income**

		(Unit: Millions of yen
	For the Year Ended March 31, 2020	For the Year Ended March 31, 2021
Net sales	3,280,002	2,730,146
Cost of sales	3,058,839	2,422,130
Gross profit	221,162	308,015
Selling, general and administrative expenses	54,153	58,576
Operating profit	167,008	249,438
Non-operating income:		
Interest income	6,621	2,144
Dividend income	2,995	8,406
Gain on sale of non-current assets	496	2,540
Share of profit of entities accounted for using equity method	15,925	-
Other	5,085	4,451
Total non-operating income	31,124	17,542
Non-operating expenses:		
Interest expenses	8,158	7,950
Share of loss of entities accounted for using equity method	-	3,406
Foreign exchange losses	-	5,282
Loss on impairment of non-current assets	5,821	-
Commission for syndicated loans	5,569	4,631
Other	4,154	1,514
Total non-operating expenses	23,703	22,786
Ordinary profit	174,429	244,194
Extraordinary income:		
Gain on sale of investment securities	20,956	-
Total extraordinary income	20,956	-
Extraordinary losses:		
Loss on impairment of non-current assets	_	16,376
Total extraordinary losses	_	16,376
Profit before income taxes	195,386	227,818
Income taxes - current	65,420	44,950
Income taxes - deferred	(51,168)	9,219
Total income taxes	14,252	54,169
Profit	181,134	173,648
Profit attributable to non-controlling interests	12,591	15,795
Profit attributable to owners of parent	168,543	157,852

# **Consolidated Statement of Comprehensive Income**

-		(Unit: Millions of yen)
	For the Year Ended March 31, 2020	For the Year Ended March 31, 2021
Profit	181,134	173,648
Other comprehensive income:		
Valuation difference on available-for-sale securities	(31)	271
Deferred gains or losses on hedges	(24,494)	41,993
Foreign currency translation adjustment	(6,597)	(6,434)
Share of other comprehensive income of entities accounted for using equity method	(7,762)	(19,561)
Total other comprehensive income	(38,886)	16,269
Comprehensive income	142,248	189,918
Total comprehensive income attributable to:		
Owners of parent	130,648	172,666
Non-controlling interests	11,600	17,251

#### Foundation for Value Creation: ESG

#### Financial and Corporate Information

# **Consolidated Statement of Changes in Net Assets**

										(Unit: Millions of yen)
	Shareholders' equity			Accumulated other comprehensive income						
For the Year Ended March 31, 2020	Share capital	Capital surplus	Retained earnings	Total shareholders' equity	Valuation difference on available-for- sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustment	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
Balance, April 1, 2019	5,000	469,129	79,831	553,960	(420)	(9,713)	22,017	11,883	47,329	613,173
Changes during period										
Profit attributable to owners of parent			168,543	168,543						168,543
Change in ownership interest of parent due to transactions with non-controlling interests			188	188						188
Increase by corporate division		843,388		843,388						843,388
Other changes in the year-net					420	(31,791)	(6,070)	(37,441)	13,416	(24,025)
Total changes in the year	-	843,388	168,731	1,012,119	420	(31,791)	(6,070)	(37,441)	13,416	988,094
Balance, March 31, 2020	5,000	1,312,517	248,562	1,566,080	0	(41,505)	15,947	(25,558)	60,745	1,601,267

(Unit: Millions of yen)

	Shareholders' equity Accumulated other comprehensive income									
For the Year Ended March 31, 2021	Share capital	Capital surplus	Retained earnings	Total shareholders' equity	Valuation difference on available-for- sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustment	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
Balance, April 1, 2020	5,000	1,312,517	248,562	1,566,080	0	(41,505)	15,947	(25,558)	60,745	1,601,267
Changes during period										
Dividends of surplus			(27,000)	(27,000)						(27,000)
Profit attributable to owners of parent			157,852	157,852						157,852
Change in ownership interest of parent due to transactions with non-controlling interests		5		5						5
Other changes in the year-net					290	37,121	(22,597)	14,813	15,180	29,993
Total changes in the year	_	5	130,852	130,858	290	37,121	(22,597)	14,813	15,180	160,852
Balance, March 31, 2021	5,000	1,312,523	379,415	1,696,938	290	(4,384)	(6,650)	(10,744)	75,926	1,762,120

#### Financial and Corporate Information

# **Consolidated Statement of Cash Flows**

		(Unit: Millions of yen
	For the Year Ended March 31, 2020	For the Year Ended March 31, 2021
Cash flows from operating activities		
Profit before income taxes	195,386	227,818
Depreciation and amortization	197,940	187,737
Loss on impairment of non-current assets	5,821	16,376
Interest and dividend income	(9,616)	(10,550)
Interest expenses	8,158	7,949
(Increase) decrease in trade receivables	(115,177)	(28,213)
(Increase) decrease in inventories	2,177	22,674
Increase (decrease) in trade payables	171,139	25,188
Other-net	86,413	(51,490)
Subtotal	542,242	397,490
Interest and dividends received	25,822	41,642
Interest paid	(7,814)	(8,936)
Income taxes paid	(8,579)	(89,371)
Net cash provided by operating activities	551,670	340,825
Cash flows from investing activities		
Purchase of investment securities	(115,798)	(31,580)
Proceeds from sale of investment securities	15,846	-
Loan advances	(4,126)	(4,974)
Proceeds from collection of loans receivable	1,633	650
Purchase of non-current assets	(211,188)	(241,358)
Proceeds from sale of non-current assets	3,806	1,461
Purchase of shares of subsidiaries	_	(1,511)
Purchase of shares of subsidiaries resulting in change in scope of consolidation	(2,950)	-
Other-net	1,913	5,221
Net cash used in investing activities	(310,863)	(272,092)

	(Unit: Millions of ye			
	For the Year Ended March 31, 2020	For the Year Ended March 31, 2021		
Cash flows from financing activities				
Increase (decrease) in short-term borrowings-net	(1,645,769)	(23,975)		
Proceeds from long-term borrowings	1,344,698	149,746		
Repayments of long-term borrowings	(151,186)	(62,409)		
Proceeds from issuance of bonds	_	39,882		
Dividends paid	-	(27,000)		
Dividends paid to non-controlling interests	(1,557)	(574)		
Other-net	1,760	13,872		
Net cash provided by (used in) financing activities	(452,054)	89,542		
Effect of exchange rate change on cash and cash equivalents	(2,701)	977		
Net increase (decrease) in cash and cash equivalents	(213,948)	159,253		
Cash and cash equivalents at the beginning of the year	269,587	402,431		
Increase in cash and cash equivalents resulting from absorption-type split	335,000	-		
Increase (decrease) in cash and cash equivalents resulting from change in scope of consolidation	11,791	_		
Cash and cash equivalents at end of the year	402,431	561,685		

For details about financial information, please visit the Investors Relations section of our website and refer to our securities report.

JERA Securities Report and other financial results WEB https://www.jera.co.jp/english/corporate/ir

# Thermal Power Plants in Japan (as of March 31, 2021)







LNG ◆Coal ◆Heavy oil ◆Crude oil	◆Utility gas 📕 LNG te
1 Joetsu	2.38 GW ⁄ 🔶
2 Hirono	4.4 GW/ <b>**</b>
3 Hitachinaka	2 GW/◆
Hitachinaka Kyodo <hitachinaka generation=""></hitachinaka>	0.65 GW/◆
3 Kashima	5.66 GW/ <b>++</b>
<ol> <li>Chiba</li> </ol>	4.38 GW/◆
7 Goi <goi generation="" united=""></goi>	Replacement is being planned
<ol> <li>Anegasaki</li> </ol>	3.6 GW 🖊 🔶
Anegasaki < JERA Power ANEGASAKI> (Scheduled to start operation in FY2023)	1.941 GW ⁄ 🔶
10 Sodegaura	3.6 GW 🖊 🔶
1) Futtsu	5.16 GW/🔶
Yokosuka <jera power="" yokosuka=""> (Scheduled to start operation in FY2023)</jera>	1.3 GW/◆
B Minami-Yokohama	1.15 GW/🔶
🚯 Yokohama	3.541 GW/◆
🕑 Higashi-Ohgishima	2 GW/🔶
16 Kawasaki	3.42 kW/🔶
🕑 Oi	1.05 GW/🔶
18 Shinagawa	1.14 GW 🖊 🔷
19 Atsumi	1.4 GW/ 🔶
20 Hekinan	4.1 GW/
Taketoyo <jera power="" taketoyo=""> (Scheduled to start operation in FY2022)</jera>	1.07 GW/◆
22 Chita	3.966 GW 🖊 🔶
2) Chita Daini	1.708 GW/🔶
💈 Shin-Nagoya	3.058 GW/◆
😕 Nishi-Nagoya	2.376 GW/◆
26 Kawagoe	4.802 GW/🔶
29 Yokkaichi	0.585 GW 🖊 🔶



# **Overseas Business and LNG** Supplying Countries\* (\* in gray)





Provided by Chevron Australia.





Creation: ESG

# **List of Group Companies**

(as of March 31, 2021)

### **Consolidated Subsidiaries**

Name	Location	Business Description
● JERA Power International B.V.*1	Amsterdam, the Netherlands	Investing, financing, guarantees, etc. for overseas power generation business, etc.
● JERA Australia Pty Ltd*1	Perth, Australia	Managing fuel-related business in Australia
● JERA Global Markets Pte. Ltd.*1	Singapore	Fuel trading business and associated business
<ul> <li>Tokyo Timor Sea Resources Pty Ltd*1</li> </ul>	Perth, Australia	Investing in a gas field development project in the Australia-East Timor Joint Petroleum Development Area
<ul> <li>Hitachinaka Generation Co., Inc.*1</li> </ul>	Tokai-mura, Naka-gun, Ibaraki Prefecture	Power generation at thermal power plants and associated business
● LNG Marine Transport Co., Ltd.	Chiyoda-ku, Tokyo	Marine transport of liquefied natural gas and other agency business
● JERA Asia Pte. Ltd.	Singapore	Development of electricity-related and gas-related projects in Asia
● JERA Power YOKOSUKA LLC	Yokosuka City, Kanagawa Prefecture	Power generation at thermal power plants and associated business
● JERA Power ANEGASAKI LLC	Ichihara City, Chiba Prefecture	Power generation at thermal power plants and associated business
● Chita LNG Co., Ltd.	Chita City, Aichi Prefecture	Receiving, storage, and gasification of liquefied natural gas, and delivery-related operations
● Goi United Generation LLC	Ichihara City, Chiba Prefecture	Power generation at thermal power plants and associated business
● JERA Power (Thailand) Co., Ltd	Bangkok, Thailan	Power generation operation/maintenance and engineering services in Thailand (investing in the aforementioned businesses)
● Fuel TEPCO, Ltd.*2 Koto-ku, Tokyo		Petroleum product sales, operation and management of fuel facilities for thermal power generation, and disaster prevention and response operations for power plants, etc.
● JERA Power TAKETOYO LLC	Taketoyo-cho, Chita County, Aichi Prefecture	Power generation at thermal power plants and associated business
● JERA Americas Inc.	Delaware, USA	Managing power-generation and fuel-related business in the Americas (investing, financing, guarantees, etc. for US power generation business, etc.)
<ul> <li>JERA Americas Holdings Inc.</li> </ul>	Delaware, USA	Managing power-generation and fuel-related business in the Americas

#### 48 other companies

\*1 Five companies qualify as specified subsidiaries. Note that of the other 48 companies, the following qualify as specified subsidiaries: JERA Trading International Pte. Ltd.; JERA Ichthys Pty Ltd; JERA Gorgon Pty Ltd; Tokyo Electric Power Company International B.V.; JERA Power Management Asia B.V.; Reliance Bangladesh LNG & Power Ltd.; Chubu Electric Power Integra Pty Ltd; JERA Darwin Investment Pty Ltd; JERA Darwin LNG Pty Ltd; Cygnus LNG Shipping Limited; JERA Storage Investment B.V.; Pacific LNG Shipping Limited; Pacific Eurus Shipping Limited; Tokyo Timor Sea Resources Inc.; JERA Global Markets Netherlands B.V.; JERA Global Markets North America, LLC; and JERA Global Markets UK Ltd.

\*2 Company name changed to Nexeraise Co., Ltd. in July 2021.

### **Equity Method Affiliates**

Name	Location	Business Description
• Soma Kyodo Power Company, Ltd.	Soma City, Fukushima Prefecture	Operation and maintenance of thermal power plants and electricity sales
● Joban Joint Power Co., Ltd.	Chiyoda-ku, Tokyo	Operation and maintenance of thermal power plants and electricity sales
<ul> <li>KASHIMA KYODO ELECTRIC POWER Co., Ltd</li> </ul>	Kashima City, Ibaraki Prefecture	Operation and maintenance of thermal power plants and electricity sales
<ul> <li>Kimitsu Cooperative Thermal Power Company, Inc.</li> </ul>	Kimitsu City, Chiba Prefecture	Operation and maintenance of thermal power plants and electricity sales
TeaM Energy Corporation	Manila, the Philippines	Power generation business in the Philippines

37 other companies

# **Company Organization**

(As of July 1, 2021)

Corporate Auditor	Auditor's Section			
_	Internal Audit Group			
	Corporate Strategy Department			
Chairman/President	<ul> <li>Planning Group</li> <li>Research Group</li> <li>Technology Strategy Group</li> <li>Enterprise Value Creation Group</li> </ul>	<ul> <li>Information and Communi- cation Technology Strategy Group</li> </ul>	<ul> <li>Information and Communica- tion Technology Management Group</li> </ul>	
	Finance and Accounting Department			
	Accounting Group	Finance Group	<ul> <li>Structured Finance Group</li> </ul>	
	Business support and Solution Department			
	<ul> <li>Labor Affairs and Human Resources Group</li> </ul>	<ul> <li>Global Human Resources Group</li> </ul>	<ul> <li>General Affairs Group</li> <li>Legal Group</li> </ul>	
	Business Development Department			
	<ul> <li>Business Development Strat- egy Group</li> <li>Business Management Group</li> <li>Power Plant Regional Affairs Group</li> <li>Domestic Business Manage- ment Group</li> </ul>	<ul> <li>Domestic Business Development Group</li> <li>Overseas Power and Energy Infrastructure Business Group</li> <li>Offshore Wind Power Business Group</li> </ul>	<ul> <li>Renewable Energy Business Group</li> <li>Upstream Resources and Value Chain Business Group</li> <li>LNG Transaction Group</li> </ul>	
	Optimization Department			
	<ul> <li>Optimization Strategy Group</li> <li>Energy Solution Sales Group 1</li> <li>Energy Solution Sales Group 2</li> <li>Short-term Optimization Group</li> <li>Coal, Oil &amp; Biomass Fuel Group</li> </ul>	<ul> <li>Fuel Operation Management Group</li> <li>Power Operation Management Group</li> </ul>	<ul> <li>LNG Contract Management Group 1</li> <li>LNG Contract Management Group 2</li> </ul>	
	O&M Engineering Department			
	<ul> <li>O&amp;M Engineering Strategy Group</li> <li>Digital Power Plant Promotion Group</li> </ul>	<ul> <li>Operation Group</li> <li>Engineering Group</li> <li>Domestic Engineering Service Group</li> </ul>	Purchasing Group	
-		East Japan Branch		
Li Li		West Japan Branch		

# **Corporate Outline**

Corporate Name	JERA Co., Inc.	
Location	[Headquarters] Nihonbashi Takashimaya Mitsui Building 25th Floor, 2-5-1 Nihonbashi, Chuo-ku, Tokyo 103-6125 TEL: 03-3272-4631 (Switchboard) FAX: 03-3272-4635	
	[East Japan Branch] Hibiya Kokusai Building 9th Floor, 2-2-3 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0011 TEL: 03-3272-4631 FAX: 03-6363-5781	
	[West Japan Branch] JP TOWER NAGOYA 18th Floor, 1-1-1 Meieki, Nakamura-ku, Nagoya-shi, Aichi 450-6318 TEL: 052-740-6842 FAX: 052-740-6841	
Establishment Date	April 30, 2015	
Capital	JPY 5 billion yen	
Shareholding Ratio	TEPCO Fuel & Power, Inc. 50% Chubu Electric Power Co., Inc. 50%	
Business Details	<ul> <li>Thermal Power Generation Business</li> <li>Renewable Energy Business</li> <li>Gas and LNG Business</li> <li>Engineering and Consulting related to the above businesses, etc.</li> </ul>	
Number of Employees	4,907 Employees (as of March 31 2021)	



It is always the challengers, those who face difficulties head-on, who build the future. When you see players compete, the strength to do your very best wells up within you.

At JERA, we feel the same way—we are Japan's largest power company, and we are expanding the range of our activities throughout the world. We believe that taking on the challenge of "JERA Zero CO<sub>2</sub> Emissions 2050" that sets a goal of achieving zero CO<sub>2</sub> emissions by 2050, will open up a new future.

In the same way that a baseball game can turn on a single pitch, we intend to make waves in the world with our scale and ideas. Taking energy, and the promotion of culture and sports through baseball, into the future.

## JERA is devoting its energy to cheering for the Central League.



We identify with the business objective of Nippon Pro Baseball-promoting baseball to contribute to the development of sports, thereby contributing to prosperity in Japan and international goodwill-and are a special sponsor of the Central League, which continues its steadfast journey of developing baseball.

JERA Co., Inc. Nihonbashi Takashimaya Mitsui Building 25th Floor 2-5-1 Nihonbashi, Chuo-ku, Tokyo 103-6125 TEL: 03-3272-4631 FAX: 03-3272-4635 www.jera.co.jp

Energy for a New Era

