Jera

JERA GROUP CORPORATE COMMUNICATION BOOK 2022

(Integrated Report)

From Japan to the world JAPAN'S ENERGY FOR 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**

## To scale up its clean energy platform of renewables and low greenhouse gas thermal power, sparking sustainable development in Asia and around the world

To achieve decarbonization over the middle and long term while securing a stable electricity supply, JERA will, in addition to strengthening operations of the thermal power generation business it has cultivated over the years, establish a clean energy supply platform that utilizes digital technology to combine renewable energy and low greenhouse gas thermal power. By providing Asia and the world with a platform that achieves both supply stability and decarbonization, JERA aims to contribute to the sound growth and development of the world and maximize its corporate value.

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## **Editorial Policy**

Strategies

#### **About this Report**

The JERA Group Corporate Communication Book was first published in FY2020 to promote communication with stakeholders. In FY2021, this integrated report comprised financial and non-financial information, including our specific initiatives toward achieving JERA Zero CO2 Emissions 2050. Now, in FY2022, we are expanding on the non-financial information, including our zero-emission thermal power and domestic thermal power plant initiatives, messages from outside directors, and a review of JERA's material issues. We have tried to convey how departments and employees at JERA collaborate and work together to solve social issues and enhance corporate value, touching on both financial and non-financial perspectives in a way that is easy to understand. This report has been confirmed by our Sustainability Promotion Committee, which is chaired by the president and reports directly to the Board of Directors. It is meant to spark dialogue with our stakeholders, and your feedback is greatly appreciated.

#### **Notes on Predictions**

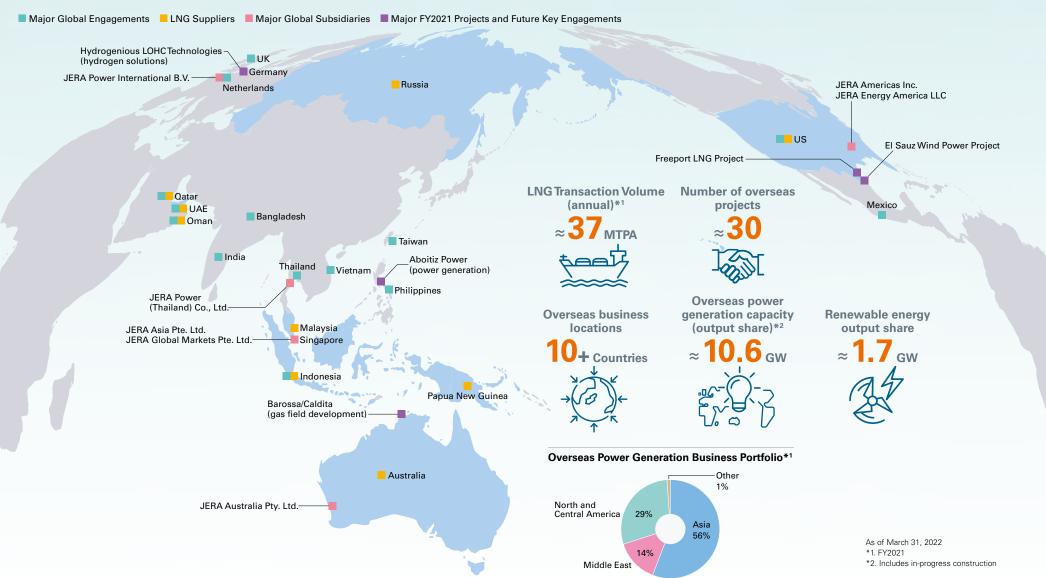
This report includes statements regarding the JERA Group's plans, strategies, and performance forecasts that are based on currently available information and subject to risks, uncertainties, and other factors beyond our control. Please note that actual future business performance, the business environment, and more may differ from the content in this report.

Scope of this Report	JERA Co., Inc., and JERA Group Companies (All mentions of "the company," "we," and "our" in this report refer to JERA Co., Inc. unless otherwise noted.)  FY2021 (April 1, 2021–March 31, 2022)  Some sections may include activities after FY2021.				
Reporting Period					
Date of Publication	December 2022 (FY2023 report scheduled for November 2023)				
Reference Guidelines	<ul> <li>International Integrated Reporting Framework, International Integrated Reporting Council</li> <li>Guidance for Integrated Corporate Disclosure and Company-Investor Dialogue for Collaborative Value Creation, Ministry of Economy, Trade and Industry (METI)</li> <li>Sustainability Reporting Standards 2016/2018, Global Reporting Initiative</li> <li>Environmental Reporting Guidelines 2018, Ministry of the Environment</li> <li>ISO 26000</li> <li>Recommendations of the Task Force on Climate-related Financial Disclosures (Final Report), Task Force on Climate-related Financial Disclosures (TCFD)</li> </ul>				
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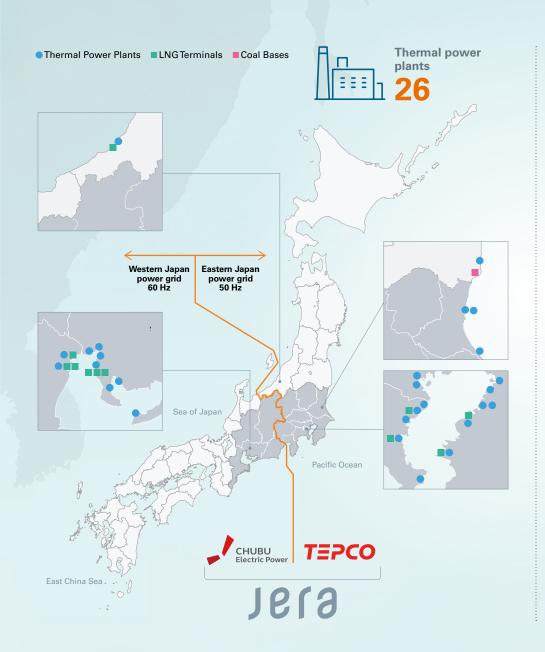


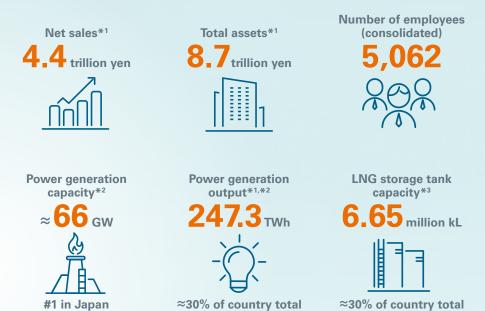
## **JERA** and the World

JERA was founded on April 30, 2015, as a joint venture and comprehensive alliance between what was then known as the Tokyo Electric Power Company, Inc., and Chubu Electric Power Co., Inc., bringing together the entire supply chain from fuel upstream operations and procurement to power generation and sales. We consolidated all of our existing thermal power generation enterprises in April 2019, becoming an energy company that leads Japan in power generation capacity and ranks among the highest in the world in fuel transaction volume. As a global company capable of solving the world's energy problems, JERA is committed to leading the way in creating a zero-carbon society.

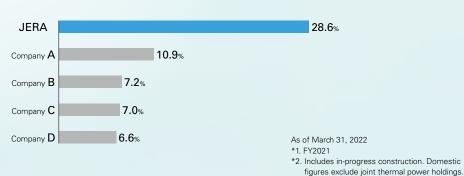


## **JERA** and Japan





#### Japan's Largest Power-Generating Companies by Domestic Share\*1

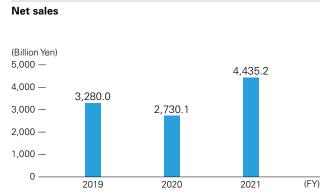


\*3. Includes joint projects with other companies in Chita and Yokkaichi

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

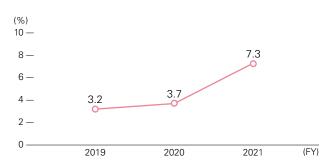
As announced in April 2019, JERA is targeting a consolidated net income of 200 billion yen by FY2025. We are pursuing a number of initiatives toward this goal, and in May of this year, the company formulated and announced its financial strategy and operation targets. We aim to achieve controlled growth and maximize corporate value by achieving medium- to long-term decarbonization while ensuring a stable supply, thanks to active participation from a diverse and inclusive workforce and pertinent corporate governance, among other measures.

#### Financial Information



Net sales had been hovering ≈ 3 trillion yen, but in FY2021, sales reached 4.4 trillion yen due to increases in the trading business and the volume of electricity sold. By segment, domestic thermal power and gas businesses account for the majority, followed by the fuel and overseas power generation businesses.

### ROIC



Although ROIC improved in FY2021 due to a significant increase in profits in the trading business as a result of soaring and fluctuating resource prices, we will continue our efforts to improve capital efficiency to reach our target of ≈ 4.5%

ROIC = {Net profit\*1 + Interest expense × (1 - Effective tax rate\*2)} ÷ (Interest-bearing liabilities + Net worth\*3)\*4

- \*1. Excluding time lag
- \*2. Using the company's effective tax rate (figures listed in the Financial Statement)
- \*3. Total net assets Non-controlling interests
- \*4. Average at the beginning and end of the period

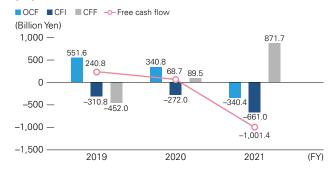
#### Period profit attributable to shareholders (including/ excluding time lag\*)



Although large net losses were incurred in FY2021 with the impact of soaring fuel prices and costs carried over due to the depreciation of the Japanese yen, net profit (excluding time lag) increased significantly due to trends such as increased profits in the trading business that seized on resource price fluctuation and recovery from the impact of COVID-19 on the previous fiscal year.

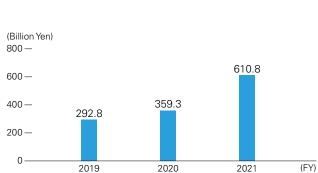
\*Profits or losses attributable to delays between fuel price fluctuations and when they are eventually reflected in sales prices

#### Cash flows from operating, investing, and financing activities (CF)/free cash flow



In FY2021, in addition to negative operating cash flow due to factors such as time lag and margin reserve increases at trading subsidiaries, there was negative free cash flow of ≈ 1 trillion yen due to an increase in cash flow from investing activities (CFI) stemming from the overlap of large-scale investments.

#### **EBITDA**

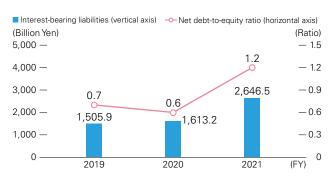


EBITDA also increased in FY2021 due to the stable earnings from our thermal power and gas business in Japan and a significant increase in earnings from the trading business due to the surge in resource prices.

EBITDA = Earnings before interest and taxes\* + Depreciation and amortization + Interest expenses

\*Excluding time lag

#### Interest-bearing liabilities / Net debt-to-equity ratio



Although interest-bearing liabilities increased significantly in FY2021 due to short- and long-term fund procurement to deal with time lag and large overseas investment projects, we are managing our balance sheet to achieve a net debt-to-equity ratio of 1.0 or less by FY2025.

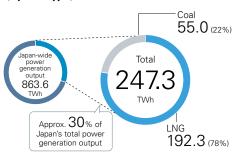
Net debt-to-equity ratio = (Interest-bearing liabilities - Cash and deposits) ÷ Net worth\* \*Total net assets - Non-controlling interests



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

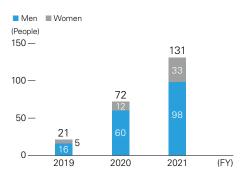
#### Non-Financial

#### FY2021 domestic power generation output (by fuel type)



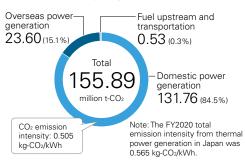
We are responsible for approximately 30% of the power generated by domestic electric utilities. A large portion of this comes from LNG, which has low CO2 emissions.

#### Number of mid-career hires (by gender)



We are actively hiring people with diverse backgrounds and advanced expertise not yet represented at JERA so that we can enter new business arenas in the future.

#### FY2021 Scope 1 CO<sub>2</sub> emissions / CO<sub>2</sub> emission intensity (Japan)



As part of JERA Environmental Target 2035, we aim to reduce domestic CO<sub>2</sub> emissions relative to FY2013 by 60% by FY2035.

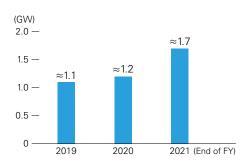
#### Number of women in management / Percentage of managerial positions held by women

Number of women in management (vertical axis) -- Percentage of management positions held by women



Based on the principle of taking full advantage of diverse values and ensuring fairness, we believe in actively providing opportunities for female employees and work to demonstrate their abilities.

#### Renewable energy output share



We will expand our wind and solar power generation business in Japan and overseas by promoting large-scale renewable energy development that leverages our strengths.

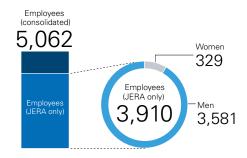
#### Number of outside directors in FY2021

As of March 31, 2022



In addition to JERA-employed executive directors and directors who have come from our shareholders, we hire outside directors in order to ensure a diversity of knowledge, experience, and other qualities among the Board of Directors.

#### Employee figures (consolidated for FY2021)



We respect each employee's diversity and individuality and work to foster an open and fair corporate culture and a work environment where everyone feels comfortable.

#### **FY2021 Board of Directors**

As of March 31, 2022



We believe that a diverse Board of Directors leads to better business decision-making and have made efforts to appoint women and foreign nationals to the board.

## Message from the Chair



Toshihiro Sano Chair, Representative Director

We are committed to sustainable development around the world by ensuring a stable power supply and promoting decarbonization amid a challenging business environment.

Strategies

#### **JERA's Origin Story**

JERA was established in 2015 to function as a comprehensive alliance throughout the supply chains of the Tokyo Electric Power Company (TEPCO) and the Chubu Electric Power Company (Chubu), from fuel upstream and procurement to power generation. Since then, we have integrated our businesses in stages, culminating in the 2019 integration of our existing thermal power generation business to complete our full value chain. The story behind our establishment begins with the Great East Japan Earthquake of 2011, a disaster that marked a significant shift in Japan's energy policy. The increasing role of thermal power generation in ensuring a stable power supply has forced the country to rely more and more on other countries to compensate for its lack of resources. The most pressing issue was finding ways to deliver a stable power supply to Japan, even as competition for resources intensified around the world. At the time, the executives of TEPCO and Chubu were convinced that like-minded companies were better off working together to resolve the issue, and their determination fueled discussions about forming an alliance. The result was "Japan's Energy for a New Era," or JERA, as we're commonly known. Our company was established with relentless drive and resolution to provide Japan with a stable energy supply by becoming a major global player in the highly competitive worldwide energy market.

We fully recognize the gravity of the current business environment. Economic sanctions following Russia's invasion of Ukraine have caused energy resource prices to surge, and demand for electricity in Japan is threatening to outstrip supply. In response, we have spared no effort to ensure a stable electricity supply throughout the country by gradually restarting power plants after long-term planned shutdowns, replacing obsolete plants, and securing fuel as needed from our affiliated energy trading partners.

It is precisely in times like these that we must return to our founding principles. My leadership as chair is based on JERA's guiding philosophy of providing Japan with a stable power supply amid fierce competition around the globe. As I tackle a host of management issues, I continue to consider where we come from to know where we need to go.

## Message from the Chair

#### A New Vision to Adapt to the Rapidly Changing Business Environment

In May 2022, we established a new vision for the year 2035 that clarifies our new long-term goals, factoring in the steady progress we made in our first three years of full-scale operations, as well as global decarbonization efforts and sweeping changes in energy security. The new vision sets out specific initiatives for achieving decarbonization over the longer term while continuously ensuring a stable energy supply. Furthermore, it encapsulates our intent to contribute to sustainable development by providing a clean energy platform in Asia and other parts of the world to pursue decarbonization and enjoy a stable supply of energy to fuel their growth.

#### Mission

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

#### Vision

To scale up our clean energy platform of renewables and low greenhouse gas thermal power, sparking sustainable development in Asia and around the world

### A Roadmap Proving JERA's Ability to Lead the Way to Decarbonization

Just two years after unveiling JERA Zero CO<sub>2</sub> Emissions 2050, we have already begun specific efforts to achieve net zero CO<sub>2</sub> emissions from our operations in Japan and abroad by 2050. As a company with global operations centered on thermal power generation, it was a huge decision for us to steer toward decarbonization. Discussions by the Board of Directors lasted the better part of a year. Some were reluctant to design, let alone announce, such a detailed roadmap with so many technical and economic issues to overcome. However, after a lengthy debate, the whole board realized the need to show the world our proactive commitment to zero emissions and reached a unanimous decision to publish the roadmap. Our aim to usher in a new era of energy makes us uniquely capable of such bold decisions. That said, we cannot achieve this challenging and lofty goal alone. To achieve zero CO<sub>2</sub> emissions, we must work with many different stakeholders to introduce innovative technologies and establish supply chains. Our roadmap for our business in



Japan presents a clear path forward. It guides our current initiatives and has increased the potential for collaboration and cooperation with a broader range of stakeholders.

### A Highly Effective, World-Class Approach to Corporate Governance

We have always claimed to be a company that competes on the world stage. Consequently, we aim to meet international standards of corporate governance, the foundation of any global player. Our Board of Directors, Leadership Panel, and auditors continually push each other to perform, but I believe we are only halfway there. We must aim for a more robust system of governance by separating management and executive functions. One way to do this, for example, is to increase the number of outside directors on the Board of Directors.

When directors from different backgrounds serve on the board, discussions become more varied and more effective. We are working to further improve the board's effectiveness by proactively providing information on matters including domestic media coverage and trends in the global LNG market to spark discussions around the situation in Russia and Ukraine, supply shortages in Japan, and other events and changes in the business environment that impact our enterprise. We also supplement the functions of the board through Directors' Discussions on important topics as well as through conversations by committees that include outside experts on

## Message from the Chair

environmental, social, and corporate governance (ESG), digital transformation (DX), trading, technological strategies, and other areas.

#### **Diversity in the Workforce**

Since my appointment as chair, I have maintained that ensuring diversity is vitally important. Having a diverse workforce is essential for making sure the right people are where we need them to be given the global spread of our operations, which includes everything from upstream fuel development and procurement to transport and power generation. In these circumstances, our need for more opportunities for women compared to other global companies is a major shortcoming. In response, we are creating more opportunities for women to become engaged and supporting programs for talent development. In April 2022, we appointed our first female executive officer to manage our promotion of diversity and inclusion. As we accelerate this trend, we will continue to promote women to department heads and other managerial positions to create an environment where women can thrive.

In addition to diversity in leadership, we have codified our succession plan and launched



operations in an effort to ensure sustainability. Looking ahead, we intend to probe deeper into training the next generation of management, assisting employees in their career paths, and more.

Further, to channel the strengths of our diverse talent, everyone must develop an awareness of where their work falls under JERA's mission and vision. Toward that end, we intend to boost our employees' sense of satisfaction with their work by developing clearer job descriptions for all and demonstrating how the actions of departments and JERA Group members interrelate.

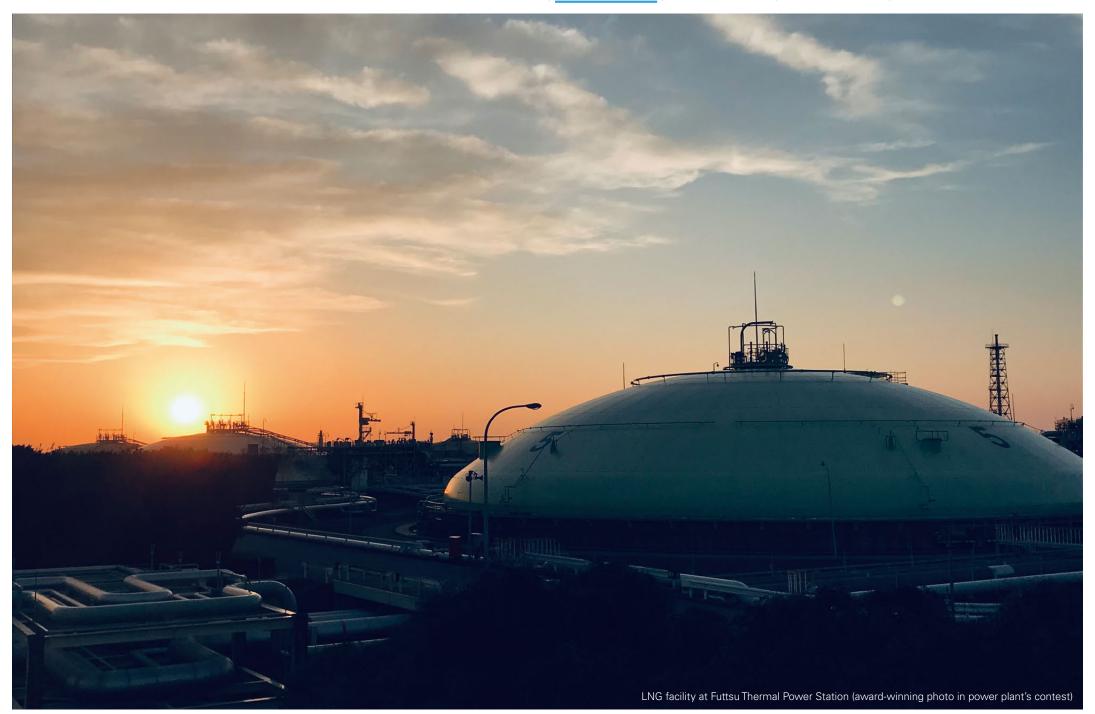
#### **Companies Exist to Contribute to Society**

I believe that companies exist to contribute to society, but right now, people are asking what that really means. These contributions are not made in an attempt to seek external validation. I ask how we can contribute to Japan as well as to other countries and regions around the world. In my view, the ideal contributions to society are the answers companies and business leaders find when they grapple with this question in earnest. Our origin and mission are perfectly aligned with this approach.

The energy landscape has changed dramatically in the recent past, making it more difficult than ever to provide Japan with a stable supply of affordable energy. As such, we are committed to contributing to society by providing a consistent supply of energy. That, I believe, is our role as a company serious about resolving societal issues. We will also extend our contributions beyond Japan into Asia and the rest of the world. I am convinced that continuing such efforts is one way we can earn the respect of society and enhance our corporate value.

We ask for the continued support of all our stakeholders as we move forward with steady determination and accountability in this challenging business environment.







Satoshi Onoda President

## We are trailblazing a path to decarbonization and ensuring a stable energy supply amid trying times.

Strategie

#### **Background of Our New Vision and JERA Environmental Target 2035**

Since establishing the JERA mission and vision in 2019, we have promoted a number of initiatives both domestically and internationally with the medium-term goal of becoming a global leader in large-scale renewable energy and LNG value chain businesses by 2025. Meanwhile, the energy business faces major changes, including stricter regulations on fossil fuels around the world as the world grapples with climate change.

Against this backdrop, JERA—Japan's largest power generation company—has announced JERA Zero CO<sub>2</sub> Emissions 2050, a commitment to achieve net zero CO<sub>2</sub> emissions by 2050 through zero-emission thermal power generation using renewable energy and fuels that do not emit CO<sub>2</sub>. This long-term endeavor to realize our mission and vision doubles as an affirmation of action that informs the world of our intent to become a global leader.

In May 2022, we established a new vision based on our steady progress on our ammonia co-firing plan and other initiatives to achieve zero CO<sub>2</sub> emissions. This vision also considers the volatile energy situation attributable to developments such as the Russia-Ukraine conflict. The new vision has three components: stable supply, decarbonization, and growth. We generate roughly 30% of Japan's electricity and thus have a responsibility to provide a stable supply. At the same time, we aim to leverage digital technology and optimization and combine renewables with low greenhouse gas thermal power to build a clean energy platform that provides a stable, affordable energy supply that is not reliant on natural conditions. Additionally, we plan to expand these initiatives overseas to contribute to sustainable growth and development in Asia and other parts of the world. While demand for electricity is expected to continue to grow alongside national economies in Southeast Asia and the rest of the continent, the international community is rapidly moving toward decarbonization. Ideally, our clean energy platform will ensure a stable power supply—the foundation of economic growth—while pursuing decarbonization over the longer term. We believe this platform will allow us to meet the needs of Southeast Asian countries seeking to expand their economies and reduce CO<sub>2</sub> emissions.

To realize our new vision, we have added depth to our existing environmental targets for 2030 in addition to creating JERA Environmental Target 2035, a new goal to reduce CO2 emissions from operations in Japan by at least 60% from FY2013 levels by FY2035. We set this total CO2 emission reduction target to demonstrate JERA's commitment to leading the way to a low-carbon society.

#### Ammonia Co-Firing: Updates on Testing and Foreseeable Challenges

From October 2021 to July 2022, we conducted tests of low-volume ammonia co-firing at Hekinan Thermal Power Station Unit 5. We burned ammonia in an active power plant to study its effects on burner materials and gain other insights. We plan to increase the volume of ammonia and conduct demonstration tests at Hekinan Thermal Power Station Unit 4 starting in FY2023 to study the combustion conditions in the boilers and the impact of the ammonium combustion on all power generation facilities. We have also begun developing a burner capable of handling a mix of fuels comprising at least 50% ammonia.

One of the challenges in introducing ammonia is to establish a supply chain for stable procurement. To use a mix of 20% ammonia at a 1GW coal-fired power plant, for example, would require roughly 0.5 million tons of ammonia per year—half the amount currently consumed in Japan. As we aim to launch full-scale operations at a co-firing rate of 20% by the late 2020s and at least 50% by the 2030s, we will need an unprecedented amount of ammonia. To build a new



Co-firing tests with a fuel mix containing 20% ammonia are scheduled to begin in FY2023 at Hekinan Thermal Power Station, Japan's largest coal-fired plant, located in the city of Hekinan in Aichi Prefecture



supply chain on such a large scale, we will need to form alliances that stretch beyond the energy industry. We recognize the need to swiftly establish a next-level supply chain for fuel ammonia rather than attempting to adapt the existing means of distributing ammonia for industrial use and fertilizers. Accordingly, we are already looking into collaborating with ammonia manufacturers and other companies in Japan and abroad to secure a reliable supply.

#### Impact of the Russia-Ukraine Conflict and Power Shortages

The situation surrounding energy has become increasingly complex in the past several years. In Europe, conditions were relatively favorable for making renewable energy stable and affordable, exemplified by the westerly winds that blew year-round and a robust international power grid. Fittingly, renewables accounted for a sizable percentage of the electricity mix. However, in the summer of 2021, wind speeds were unusually low, hobbling offshore wind power generation and forcing providers to turn to thermal power generation to compensate. This increased demand for natural gas and triggered a persistent rise in gas prices. Russia's February 2022 invasion of Ukraine made matters worse, driving national governments to reduce their reliance on Russian energy and further exacerbating an already fiercely competitive energy market. A global energy

shortage and sharp rise in resource prices ensued. The situation surrounding procurement remains unpredictable, and we will continue to monitor trends closely.

Additionally, with electricity deregulation ramping up competition and a substantial supply of renewables coming online, power companies throughout Japan are progressively shutting down uncompetitive, obsolete resources because they are increasingly difficult to maintain. Furthermore, uncertainty in fuel procurement and other developments have prompted concern over a nationwide power supply crunch in the winter of 2022. We will do everything in our power to help improve the balance between supply and demand. Specifically, we will make every possible effort to respond to tenders for additional supply capacity by general electricity transmission and distribution utilities. We will also launch a series of state-of-the-art thermal

#### Further Initiatives to Provide a Stable Power Supply

Restarting idle thermal power plants

- Ended long-term planned shutdown of Sodegaura Thermal Power Station Unit 1 and completed preparations for operation on April 17
- Contributed to a stable power supply by restarting Anegasaki Thermal Power Station Unit 5 and Chita Thermal Power Station Unit 5, consistent with supply-demand balancing measures for the peak summer period announced in June 2022
- Selected as the winner of a tender for additional capacity by transmission system operators (excluding Hokkaido and Okinawa) as a balancing measure for the winter of FY2022, and began preparing to restart units experiencing long-term planned shutdowns (Anegasaki Unit 5, Chita Unit 5, Chita Daini Unit 1, Yokkaichi Group 4 Units 4 & 5)

Replacing thermal power plants  Contributed to a stable power supply through the steady replacement of thermal power generation facilities totaling roughly 6,660 MW

Unit	Output	Start of operation
1 (new)	650 MW	February 2023
2 (new)	650 MW	April 2023
3 (new)	650 MW	August 2023
1	780 MW	August 2024
2	780 MW	November 2024
3	780 MW	March 2025
1	650 MW	June 2023
2	650 MW	February 2024
5	1,070 MW	August 5, 2022
	1 (new) 2 (new) 3 (new) 1 2 3 1	1 (new) 650 MW 2 (new) 650 MW 3 (new) 650 MW 1 780 MW 2 780 MW 3 780 MW 1 650 MW 2 650 MW

Securing fuel for a stable power supply

- Contributed to stable power supply by procuring a record 4.5 million tons of additional LNG in FY2021 to counter fluctuation during peak periods
- Scheduled to continue cooperating with stakeholders in FY2022 to help secure a stable supply of fuel to meet domestic demand for electricity

power plants totaling 6,660 MW between FY2022 and FY2024 with the aim of maintaining long-term supply capacity and conserving the environment.

#### **New Ways of Working for Employees and Their Families**

Strategies

In 2019, the vast majority of our employees were seconded from TEPCO and Chubu; by 2021, roughly 90% of them had decided to transfer to JERA. We have introduced a unique human resources system while recruiting new graduates and mid-career professionals for a wealth of talent from diverse backgrounds, mainly experts from the business and corporate sectors. Our HR and recruitment system is job-based, with straightforward job descriptions to secure diverse talent and improve retention rates, even in an increasingly fluid labor market.

We also assign some employees involved in power generation operations to other power plants to gain experience, create opportunities for engineers to interact with each other, and take additional steps to stimulate exchange across disciplines, departments, and companies. Although we initially feared this initiative would cause friction when different corporate cultures clashed, everyone was ready to improve their technical skills through friendly competition, generating synergy in the form of mutual respect for each other's cultures and proactive incorporation of the best of both worlds.

The company must be an appealing workplace for employees as well as their families. The quest to create workplaces where employees can work in ways that bring happiness to themselves and their families is the essence of our vision to design new ways of working. Therefore, we have created an environment where most work can be done in the cloud from anywhere. This should make it easier for employees to balance work with parenting, home care, and other responsibilities. We intend to continue improving these working environments to relieve employee stress as they fulfill their role as parents or caregivers.

### **Our Vision for Digital Transformation**

Our digital strategy is to become a data-driven company that captures relevant real-time data, which we use to make and act on swift management decisions. We have already succeeded in becoming the first Japanese energy company to move the entirety of its core systems to the cloud. This digital transformation (DX) is spearheaded by Senior Managing Executive Officer Sami

Ben Jamaa, who draws upon a wealth of experience with IT transformations in global companies and under whose guidance our ICT departments have become reform-minded organizations comprising people from both the TEPCO and Chubu groups as well as mid-career professionals from Japan and around a dozen other countries.

Beyond DX, we have a concept known as the Digital Power Plant Project, in which we seek to transform power plant operations with digital technology. We aim to improve our power generation facilities' competitiveness and market responsiveness by packaging power plant facilities and operations—combining the latest digital technology with our unique homegrown capacity for continuous improvement and technology—and establishing advanced data- and Al-based power plant operations. These efforts will also allow us to replace and digitize the practical expertise of our seasoned professionals, which we expect will facilitate our propagation and reproduction of technology as we expand outside Japan.



Additionally, in July 2022, we launched JERA Digital Academy (JEDI), a DX human resources development program for all group company employees, and are expanding the program to include sites overseas. Digital technology is an essential tool for energy companies to achieve decarbonization, and we will lay the groundwork for all employees to use it for their own purposes.

#### **Closing Words for Stakeholders**

Contributing to society is in the DNA of our company, which generates power to support the development of local communities. To us, nothing is more important than providing a safe, affordable, stable power supply to underpin industry and daily life. We have also crafted a vision to build a clean energy platform to combat climate change and expand our business into Southeast Asia and other parts of the world. However, we also recognize the need to contribute to the sustainable development of Southeast Asia, not by simply generating profits but by creating industries, providing job opportunities, and taking other steps to enrich the lives of the people who live there. When conveying these ideas to JERA employees, I often refer to the story of Japanese engineer Yoichi Hatta. He contributed so much to the development of Taiwan under Japanese rule through the construction of the Wushantou Dam that a bronze statue was erected in honor of him. Still today, he remains one of the most revered Japanese people in Taiwan. I hope that our employees—especially the younger ones—will aim to contribute to society through their work and earn respect wherever we operate, much as Hatta did.

We will continue to expend every effort to create working environments where employees can devote themselves to their work with peace of mind and contribute more to our stakeholders than ever before. We ask that you continue to support us in our endeavors.

## The World Around JERA

## The Impact of Global Trends on JERA—Challenges and Opportunities



Joseph M. Naylor Outside Director, JERA Co., Inc.

He previously served as Corporate Vice President of Chevron, covering Policy, Government and Public Affairs. He joined JERA in April 2021 as a member of the Board of Directors.

### Resolute in Our Mission of Providing a Stable Energy Supply and **Leading in the Energy Transition**

JERA is facing a number of longer-term and nearer-term global trends that could impact its business. While it is impossible to predict exactly how these trends will play out, JERA is well positioned to fulfill its role of providing cleaner, affordable, and reliable energy for today while investing in the energy of the future.

### Global Trends: Ever-Changing Supply and Demand in the Electricity Market

Over the next few decades, world-wide total primary energy demand is expected to increase as the global population approaches 10 billion people. Much of this population growth is in developing areas of the world where people aspire to improve their lifestyle through the acquisition of energy consuming devices like cook stoves, air conditioners, motor scooters and automobiles. The demand for electricity is forecast to increase in all sectors (e.g. residential, commercial, industrial, and transportation) and to outpace population growth.

While fossil fuels are expected to continue to supply the largest share of total primary energy, renewables are forecast to grow at a faster annual rate than all other sources of energy to the point where their share of the energy mix nearly matches that of fossil fuels in 30 years time. The growth of renewables has historically been driven by government policies but it is increasingly being driven by economics as the costs of wind and solar power generation in particular continue to decline.

The demand and supply of energy, and electricity in particular, will also be impacted by technological advances. While demand is primarily driven by population growth and lifestyle choices, newer forms of energy consumption could impact the pace of this growth (e.g. faster electrification of the transport and space-heating sectors). Technological advancements in large-scale, low-cost energy storage could enable intermittent renewables to be less dependent upon more conventional forms of energy such as thermal power generation, creating the opportunity for renewables to play an even larger role in the overall energy mix. The digitization of the grid and power generation facilities could enable more efficient use of power generation and transmission resources.

### The Challenge of Balancing Decarbonization and Stable Supply While Facing an Uncertain Future

One of the largest trends that will impact the energy business is the push to decarbonize all aspects of society to address the concerns of climate change. This is expected to be enacted primarily through direct and indirect government policies (e.g., carbon prices, emission caps, building standards, etc.). While the overall direction towards a less-carbon intensive society is clear, the pace at which various jurisdictions enact the necessary policies is quite difficult to predict. During this time, there could be tension between the push to decarbonize and the need to ensure a stable supply of energy (as witnessed recently during the Russian/Ukraine crisis).

In addition to the longer-term trends outlined above, there are nearer-term trends that are also

Strategies

### The Impact of Global Trends on JERA

impacting the energy sector. The Russian/Ukraine crisis has disrupted the traditional energy flows, increased commodity prices, and caused governments to rethink their dependence on certain sources of non-domestic energy. While some of these effects – such as the commodity price spikes – may be transitory others may have a longer lasting impact. Also, after over a decade of strong economic growth, many developed countries around the world are seeing significantly higher levels of inflation, higher interest rates, and a greater likelihood of entering into an economic recession.

Finally, a nearer-term trend with both short- and long-term implications is the growing importance of Environmental, Social, and Governance (ESG) matters for companies. Investors, customers, employees, and civil society have growing expectations of a company's role in society. This includes not only specific actions companies should take on issues such as: climate change; water usage; diversity, equity, and inclusion; human rights; and corporate governance; but also how much they should publicly disclose about these actions.

## JERA's Contribution to Decarbonization: An Unparalleled Position with Unrivaled Strengths

The global trends and uncertainties create opportunities for companies that have robust and diverse portfolios, a strong balance sheet, and the ability to invest in a variety of options for the future; JERA is such a company.

JERA recognizes that it has a critical role in society to continue to provide cleaner, affordable, and reliable energy to its customers. It does this through its enviable portfolio of assets in Japan and overseas, including power generation facilities, upstream and midstream assets, and an organization with a long legacy of operation and optimization experience.

The existing portfolio provides the funds and expertise to make additional investments for the future. JERA will continue to invest wisely in current facilities to maintain their safe and reliable operation. In addition, there are many new and attractive opportunities in the energy transition that JERA is evaluating and in which it is investing. These include onshore and offshore wind facilities, ammonia and hydrogen value chain assets, and upstream and midstream natural gas assets.

JERA also has opportunities to use and monetize the operating know-how it has developed over the past many years while developing new processes to operate even better. It can provide energy management solutions to customers to help them operate and maintain their power generation facilities more efficiently and assist with their own decarbonization plans. JERA is

continuing to refine its own operations including digitizing many of its facilities. This will become another offering of energy management solutions provided to customers of the future. JERA will also continue to share its expertise with host governments of the countries in which it operates to help them as they develop policies that facilitate their own energy transition.

Finally, all these future uncertainties also have the potential to create volatility in the energy market. JERA has a strong and growing global trading organization that is able to ensure a secure supply of energy to customers while generating value and mitigating risks.

## JERA Plays a Vital Role in Helping Japan Write a Realistic Roadmap to Decarbonization

Despite being one of the world's largest energy consumers, Japan is not blessed with domestic resources and is dependent on imports from overseas for almost all of its energy needs.

The geography of Japan also makes it more difficult than in other countries to develop renewable energy sources such as solar and wind on a large scale. Also, unlike the European Union, for example, Japan and its neighboring countries cannot share an energy distribution network on the scale they could if sharing a landmass.

In this context, JERA must accomplish incremental and mid- and long-term decarbonization of its Japanese assets while providing a stable energy supply to realize the government's goal for Japan to reach carbon neutrality by 2050.

As Japan's largest power generation company, JERA can leverage strategies to achieve zero CO<sub>2</sub> emissions by 2050 and lead the way to a low-carbon society. These strategies include complementing "zero-emission thermal power" with the introduction of renewable energy and green fuels, as well as adopting measures at the decision stage that combine the most innovative and reliable technologies available (i.e., "smart transition").

#### **Conclusion: The Energy Transition Creates Opportunities for JERA**

While there are always a number of uncertainties about the future that companies face, the uncertainties that are forecast presently – particularly those associated with decarbonization and the energy transition – are more numerous and potentially more impactful than normal. These uncertainties also create opportunities for companies that are well-positioned. JERA plans to play its role in the energy transition, making investments in the energy of the future while meeting the needs of customers today.

Strategies

## **Value Creation Process**

### Contributing to Sustainable Corporate Value Growth and a Sustainable Society

#### The World Around JERA

- Rapid changes in power supply and demand
- Increased future uncertainty →Leading to difficulties in providing a stable power supply and promoting decarbonization

#### **Business Capital Supporting JERA's Growth (Input)**

#### **Human Capital**

Number of employees (consolidated) 5.062

#### **Intellectual Capital**

Investment in professional development (including digital and administrative initiatives)

#### **Natural Capital**

Total energy consumption 50.80 million kl (crude oil equivalent)

#### **Financial Capital**

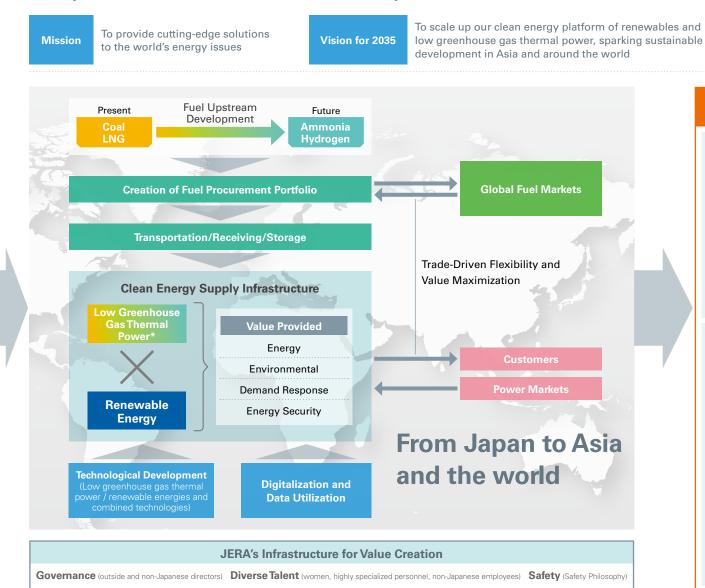
Shareholders' equity 1,688.1 billion yen

#### Manufacturing Capital

26 power plants in Japan ≈ 30 overseas projects in more than 10 countries

#### Social/Relational Capital

World leader in LNG trade volume Dominant presence in domestic power generation



#### Value Created by JERA (Output)

#### **Economic Value** (FY2025)

#### **Profitability**

Consolidated net profit: 200 billion ven (60% from overseas) EBITDA: 500 billion yen

#### **Capital Efficiency**

ROIC: ≈4.5% (ROE: ≈9%)

#### **Growth Potential**

CFI: 1,400 billion yen (650 billion ven related to decarbonization)

#### Social and **Environmental Value**

#### Stable Energy Supply Infrastructure Development

- Growth in LNG transaction volume
- Replacement of domestic thermal plants
- Stable fuel procurement

#### Adoption and Expansion of Renewable Energies

• Renewable energy development target: 5 GW

#### **Decarbonization of Thermal Power and Fuel Supply** Chain

- · Ammonia co-firing demonstration tests
- International competitive bidding for fuel ammonia

<sup>\*</sup> Thermal power generation facilities designed for co-firing with zero-emission fuels such as hydrogen and ammonia

#### Value Creation Process

**JERA's Goals** (Outcome)

## Sustainable **Corporate Value** Growth

- A business portfolio that enables a stable and sustainable energy supply
- Maximizing the value proposition of energy

## Contributing to a **Sustainable Society**

- Forming viable decarbonization processes
- Solutions for energy challenges facing Japan and the world

Our value creation process aims to build a business model that provides a clean energy supply infrastructure combining low greenhouse gas thermal power and renewable energy sources. This model will allow us to achieve sustained corporate value growth and contribute to a sustainable society with zero emissions by 2050. Furthermore, by expanding this business model to Asia and the world, we will participate in healthy growth and development on a global scale.

Specifically, we will support the introduction of renewable energy via thermal power solutions able to generate power in any environment, along with zero-emission thermal power green options that use ammonia and hydrogen. This marriage of renewable energy and zero-emission thermal power will enable us to achieve decarbonization and secure a stable power supply.

We must pursue the best solutions in order to attain a carbon-free future. The types of energy and power grid options available vary by country and region, so it is necessary to formulate roadmaps suited to each situation. We already have initiatives underway overseas, including research and support toward developing a decarbonization roadmap for Indonesia's power sector (FY2021) and collaboration with Summit Power International on developing a decarbonization roadmap for Bangladesh (FY2022).

We will drive the adoption and expansion of green fuel by building a value chain in the same way we have for LNG, from fuel upstream operations and procurement to transportation, receiving, storage, power generation, and sales. Power generation efforts, for example, include ammonia commercialization demonstration tests at Hekinan Thermal Power Station and projects exploring co-firing rates of more than 50%.

In offshore wind power, we are acquiring know-how through participation in several overseas projects and establishing a base of operations in Akita Prefecture to prepare for developing the business in Japan. In addition, we are developing solar power solutions in Japan as we progressively accelerate our renewable energy initiatives.

We will also use the trading market to maximize the value we generate through various power sources, namely our energy and environmental value.

Through these efforts, we continue to define the optimal business model for our entire value chain and business portfolio, one that is responsive to both time and place. The many kinds of capital that comprise the JERA Group are what underpin the realization of our mission and vision



Hisahide Okuda Corporate Vice President, Managing Executive Officer, Director, Corporate Strategy



# JERA Zero CO<sub>2</sub> Emissions 2050: Committed to Achieving Zero CO<sub>2</sub> Emissions across Domestic and Overseas Operations

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

- > JERA's mission is to provide cutting-edge solutions to the world's energy issues.
- > JERA is rising to the challenge of achieving net-zero CO<sub>2</sub> emissions from its domestic and overseas operations in hopes of creating a more sustainable society for us all.
- \* JERA Zero CO<sub>2</sub> Emissions 2050 is premised on steady advances in decarbonization technology, economic viability, and consistency with government policy. JERA is developing its own decarbonization technologies and taking the initiative to ensure economic viability.

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

1

Combining Complementary Renewable Energy with Zero-Emission Thermal Power

JERA will achieve net-zero emissions by adopting an approach that supplements renewable energy with zero-emission thermal power generation, which is capable of generating electricity regardless of natural conditions. JERA will promote the adoption of greener fuels and pursue thermal power that does not emit CO<sub>2</sub> during power generation.

2

## **Establishing Country and Region-Specific Roadmaps**

JERA will achieve zero CO<sub>2</sub> emissions by establishing roadmaps that chart optimal solutions for each country and region. Since the energy situation varies by country and region, with different solutions available based on the feasibility of renewable energy options and the presence of pipelines and transmission lines, JERA will work with stakeholders to establish country and region-specific roadmaps. We have already developed a roadmap for our business in Japan, which we will extend to other countries and regions.

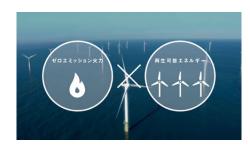
3

### **Ensuring a Smart Transition**

JERA will achieve zero CO<sub>2</sub> emissions through our "smart transition" strategy, which combines innovative and viable technologies available when adoption decisions are made. This approach will lower technical risk and facilitate a transition to a green society.

TV/Web Ad: "Changing the Way We Think About Energy"



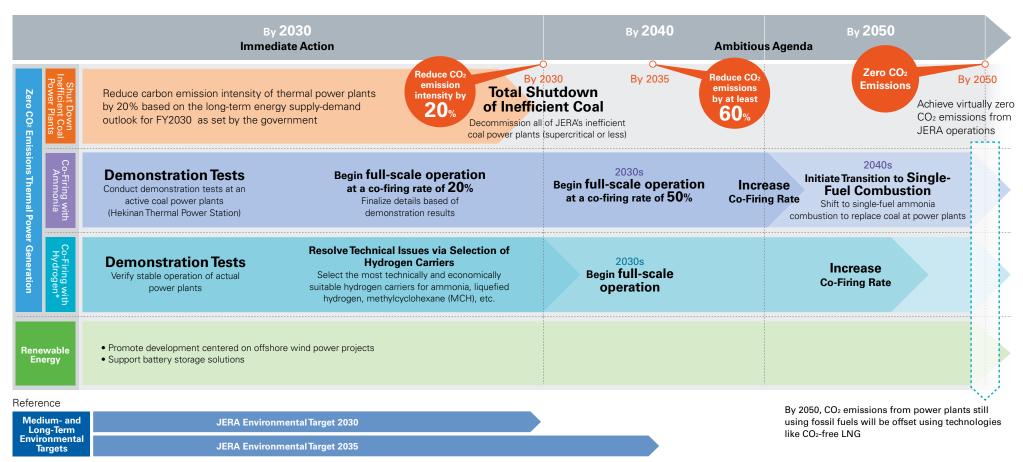








## JERA Zero CO<sub>2</sub> Emissions 2050 Roadmap for its Business in Japan



This roadmap will evolve incrementally, adapt to changes in government policy and other relevant conditions, and be revised as needed. \* We are also considering the use of CO2-free LNG.

#### **JERA Environmental Target 2030**

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

- Decommission all inefficient coal power plants (supercritical or less) and conduct demonstration tests of mixed combustion with ammonia at high-efficiency (ultra-supercritical) coal power plants
- Promote the development of renewable energy centered on offshore wind power projects and work to further improve the efficiency of LNG thermal power generation
- Reduce carbon emission intensity of thermal power plants by 20% based on the long-term energy supply-demand outlook for FY2030 as set by the government

#### **JERA Environmental Target 2035**

JERA aims to reduce CO<sub>2</sub> emissions from domestic operations relative to FY2013 by at least 60% by FY2035 through the following initiatives:

- · Strive to develop and adopt renewable energy in Japan given expanded adoption under the national government's 2050 carbon neutral policy
- · Commit to reducing carbon emission intensity from thermal power generation by promoting hydrogen and ammonia co-firing

<sup>&</sup>quot;JERA Zero CO2 Emissions 2050 for Its Business in Japan" and the JERA Environmental Targets are premised on steady advances in decarbonization technology, economic rationality, policy consistency, and the business climate under which these goals will be realized.

Strategies

## **Zero-Emissions Thermal Power**

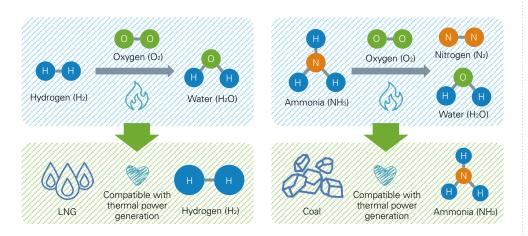
As stated in JERA Zero CO<sub>2</sub> Emissions 2050, we will rise to the challenge of achieving decarbonization by combining renewables with zero-emissions thermal power.

Generating power with solar, wind, and other renewables involves no greenhouse gas emissions, and the energy sources are available in perpetuity. Thus, they should be adopted whenever and wherever possible to prevent global warming and use energy most effectively. However, output from these natural energy sources fluctuates widely due to season, weather, and other natural factors, making it difficult to ensure a stable power supply when and where it is needed. To mitigate this problem, we leverage one of the defining characteristics of thermal power generation: adjustable output.

Toward that end, we will introduce zero-emissions thermal power by replacing conventional fuels like coal and LNG with ammonia and hydrogen, which emit no CO2 when combusted. Our aims with this shift are to complement renewables with thermal power and vice versa and to achieve carbon neutrality by 2050.

#### **Utilizing Ammonia and Hydrogen**

Hydrogen is often called the ultimate clean energy, garnering attention worldwide for its complete lack of carbon emissions.



Ammonia, a hydrogen-based form of energy, is an energy carrier that efficiently transports and stores hydrogen energy. Ammonia is an apt fuel for clean thermal power generation because it emits no CO<sub>2</sub> when combusted, meaning we can use it in its normal state. Accordingly, it should become commercially viable as a fuel for thermal power generation in short order.

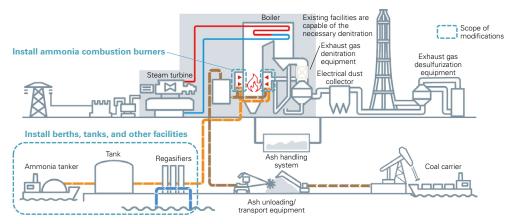
#### Using Existing Facilities to Reduce Costs and Expedite Installation

We believe that gradually replacing the fuels used in thermal power generation facilities with ammonia and hydrogen is an effective option for reducing costs and deploying zero-emissions thermal power rapidly while maintaining a stable power supply.

Thanks to their compatibility in terms of combustion speed and quantity of heat, we plan to use both ammonia and hydrogen in our power generation. Ammonia is compatible with the boiler-type systems used in coal-fired thermal power, while hydrogen is compatible with the gas turbine-type systems used in LNG-fired thermal power.

Notably, the Japanese government's Sixth Strategic Energy Plan also calls for the promotion of co-firing with non-carbon fuels and other thermal power generation efforts by 2030 while ensuring facility capacity is sufficient for a stable supply. And for the first time, the plan includes hydrogen and ammonia in its composition of power sources.

#### Ammonia Co-Firing in Boiler-Type Thermal Power (Coal-Fired) Generation

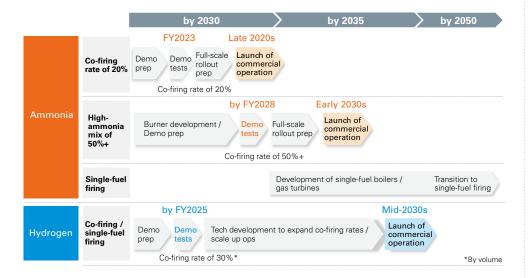


#### **7ero-Emissions Thermal Power**

#### Ammonia and Hydrogen Introduction Plan

In FY2023, we plan to start demonstration tests in which we replace 20% of the existing fuel mix with ammonia at Hekinan Thermal Power Station Unit 4. We will increase the ammonia component to at least 50% by FY2028 and conduct more demonstration tests with the aim of making high-ammonia mixes (50%+) commercially viable in the early 2030s.

We also plan to conduct demonstration tests with a co-firing rate (by volume) of 30% hydrogen at our gas turbine-type LNG-fired thermal power plants by FY2025 to make hydrogen mixes commercially viable in the mid-2030s.



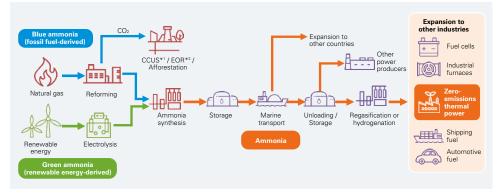
### **Building a Supply Chain**

If we replace 20% of the fuel at a 1 GW thermal power plant with ammonia, we would need roughly 0.5 million tons of ammonia each year, equivalent to half the current annual consumption in Japan, which is mainly for industrial use and fertilizers.

Therefore, it is essential to establish a new supply chain for fuel ammonia to ensure a reliable supply for thermal power generation. We will also consider expanding our business domain beyond power generation to include the development of clean fuels for other industries.

The process of producing ammonia and hydrogen will be one of the keys to unlocking a decarbonized society. We are exploring a wide range of possibilities, including green ammonia and hydrogen produced via electrolysis of water with electricity derived from renewables, as well as blue ammonia and hydrogen, which store CO2 separated and captured in fossil fuel-powered manufacturing processes.

#### **Ammonia Supply Chain**



- \*1 CCUS: Carbon dioxide capture, utilization, and storage
- \*2 EOR: Enhanced oil recovery

### **Expansion into Asia**

We believe that zero-emission thermal power with ammonia and hydrogen is a realistic approach to achieving both a stable power supply and decarbonization. By offering this approach as one of our solutions to people in burgeoning economies in Asia and the rest of the world, we hope to contribute to the power supply and pursuit of decarbonization that underpins economic growth in those countries and regions.



#### **7ero-Emissions Thermal Power**

### Promoting and Expanding Green Fuels by Leveraging the Strengths of the **Entire Value Chain**

Together with many partners, JERA has established a full value chain—from power generation to gas field development, liquefaction, and fuel transport and storage—to realize stable and economical procurement of LNG. We will apply this concept of full value chain utilization to hydrogen and ammonia to drive the promotion and expansion of green fuels.

#### Initiatives to Achieve a Full Value Chain



Collaboration with Yara International and Idemitsu Kosan

Collaboration with ENEOS and JFE Holdings

Collaboration with Kyushu Electric Power and Chugoku Electric Power

#### **SPOTLIGHT**

#### Investment in Hydrogenious

In September 2021, JERA entered into an investment agreement and a shareholders' agreement with Hydrogenious LOHC Technologies GmbH, a developer of hydrogen storage and transport technology headquartered in Erlangen, Germany. Hydrogenious has proprietary technology for liquid organic hydrogen carriers (LOHC), a type of hydrogen carrier.

Hydrogen is widely considered to be a next-generation replacement for fossil fuels at thermal power plants because it emits no CO2 when it is combusted. However, large-scale marine transport of hydrogen involves challenges, and technological development for hydrogen carriers is ongoing. JERA intends to assist in resolving technical issues and select cost-competitive carriers.

The company's LOHCs stand apart because their carrier medium choice of benzyltoluene to which hydrogen is added through a chemical reaction—results in a liquid that can be transported and stored at ambient temperature and pressure and is easy to handle because it is flame resistant and non-explosive. Hydrogenious is constructing the world's largest LOHC plant in Dormagen, Germany, and plans to bring the facility online in 2023.

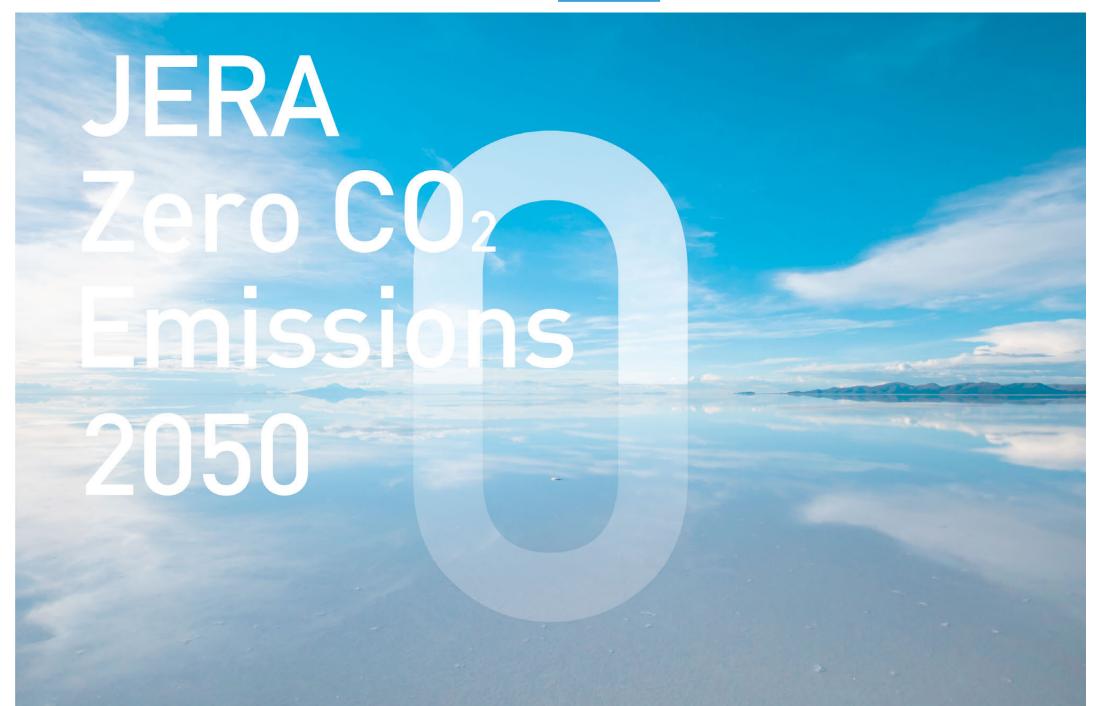
By investing in Hydrogenious, JERA intends to acquire insight into LOHC technology a potential game-changer for hydrogen energy carriers—and assist in the development of LOHC plants in Europe, North America, and Asia to help establish a global hydrogen supply chain.





JERA ZERO CO<sub>2</sub> Emissions 2050 Website https://www.iera.co.ip/english/corporate/zeroemission/

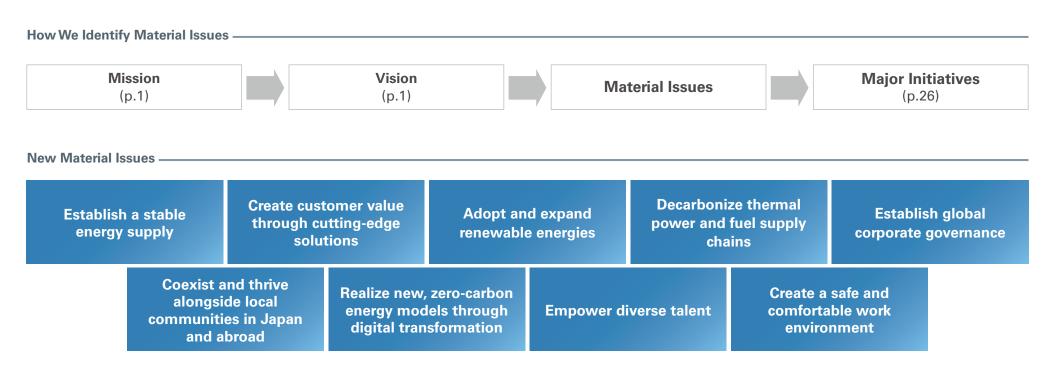






## **Material Issues**

JERA identified and published our material issues starting in 2020 based on the goals set forth in our April 2019 business plan. We review our material issues every year in response to changes in the internal and external environment, and this year we pinpointed nine issues guided by the new corporate vision and JERA Environmental Target 2035, which were both announced in May 2022. In addition, we map out the issues, follow the Plan-Do-Check-Act (PDCA) cycle toward realizing our mission and vision, and implement materiality-conscious management processes.



#### **How We Set Our Material Issues**

We address material issues accordingly as they evolve by reassessing the issues and adjusting KPIs, among other efforts.



#### **Identify Issues**

We composed a list of 59 issues pertinent to our company following an analysis of the industry environment, our business strategies, and other factors.



#### **Assess Importance and Relevance**

We evaluate each of the 59 issues identified in Step 1 in terms of their importance to the company, stakeholders, and society, as well as their relevance to factors like company strategy and stakeholder opinion.



#### **Identify Material Issues**

Taking into account Step 2 assessments, the Sustainability Promotion Committee (chaired by the company president) designates material issues.



#### **Revise Material Issues**

Guided by the new corporate vision and JERA Environmental Target 2035 announced in May 2022, we abstracted and reorganized the material issues first formulated in 2020 into nine issues, which were considered and approved by The Sustainability Promotion Committee.

### **Material Issues**

				<ul><li>Initiatives ○ KPIs</li></ul>
	Material Issues	Major Initiatives	Related Pages	Related SDGs
1	Establish a stable energy supply	Stabilize supply and demand management Replace domestic facilities representing 7–9 GW of energy (at 5–7 sites) Optimize security measures and monitoring systems in line with global standards Enhance JERA's business continuity plan (BCP) and business continuity management (BCM) Improve disaster preparedness through systematic education and training Build a disaster prevention infrastructure by maintaining reserves	Business Development (p.31) Optimization (p.33) O&M Engineering (p.35) Initiatives at Thermal Power Plants in Japan (p.37) Response to TCFD Recommendations (p.45) Risk Management (p.72) Information Security (p.75)	1 mm   3 mm mm   7 mm mm   9 mm mm   10 mm mm   1 mm mm mm   1 mm mm mm   1 mm m
2	Create customer value through cutting-edge solutions	<ul> <li>Develop new technologies that can spearhead a sustainable society</li> <li>Further innovate by combining new technologies with power generation technology</li> <li>Strategically acquire intellectual property in Japan and abroad and apply it to new business</li> <li>Develop and deliver solution selling that ties in with company business</li> </ul>	JERA Zero CO <sub>2</sub> Emissions 2050 (p.19) Zero CO <sub>2</sub> Emissions Thermal Power (p.21) Business Development (p.31)	9 HERITAGONIA 12 REPORTED INCOMPUTE INFORMATION INFORM
3	Adopt and expand renewable energies	© Target renewable energy development representing 5 GW of energy by 2025  ■ Acquire essential know-how about offshore wind power	JERA Zero CO <sub>2</sub> Emissions 2050 (p.19) Zero CO <sub>2</sub> Emissions Thermal Power (p.21) Business Development (p.31) O&M Engineering (p.35) Response to TCFD Recommendations (p.45) Environment (p.53)	7 mentadar 13 dana
4	Decarbonize thermal power and fuel supply chains	<ul> <li>Establish hydrogen and ammonia supply chains</li> <li>Utilize ammonia effectively, with demonstration tests of co-firing rates of 20% at Hekinan Thermal Power Station Unit 4 planned for FY2023, commercial operation of co-firing rates of 20% targeted for the late 2020s, and commercial operation of co-firing rates of 50% intended to begin in the early 2030s</li> <li>Utilize hydrogen effectively, with commercial operation planned for the 2030s</li> <li>Pursue carbon capture and storage (CCS) know-how and project opportunities</li> </ul>	JERA Zero CO <sub>2</sub> Emissions 2050 (p.19) Zero CO <sub>2</sub> Emissions Thermal Power (p.21) Business Development (p.31) O&M Engineering (p.35) Response to TCFD Recommendations (p.45) Environment (p.53)	7 manufacture 9 manufacture 12 months agenticated 13 miles agenticated 14 miles agenticated 15 miles agenticated 1
5	Establish global corporate governance	<ul> <li>Improve board effectiveness</li> <li>Instill and put into practice a compliance culture and strengthen the JERA Group compliance system</li> <li>Make improvements to reporting of financial and non-financial information</li> <li>Initiate phased and joint decarbonization efforts with regional business partners, especially in Asia, that emphasize our power plant O&amp;M and engineering technologies</li> </ul>	O&M Engineering (p.35) ESG Management (p.51) Stakeholder Engagement (p.68) Corporate Governance (p.69) The Strong Board of Directors Behind JERA's Autonomous Management System (p.71) Compliance (p.76)	7 months of the first state of t
6	Coexist and thrive alongside local communities in Japan and abroad	<ul> <li>Take action to coexist with the environment, educate the next generation, and resolve issues in local communities based on our Social Contribution Activity Policy</li> <li>Build good relationships with stakeholders through cooperative efforts with the community</li> <li>Strengthen systems for the prompt and proper reaction in response to domestic and international crises</li> <li>Practice global corporate social responsibility (CSR) founded on the needs of overseas sites</li> </ul>	Environment (p.53) Coexisting with Local Communities (p.64) Safety and Health (p.66) Stakeholder Engagement (p.68) Risk Management (p.72)	3 server   8 months and   10 minute   11 minute   17 minute   17 minute   18 m
7	Realize new, zero- carbon energy models through digital transformation	<ul> <li>Acquire cutting-edge IT technologies through upgrading the R&amp;D environment and building relationships with leading technology companies, among other efforts</li> <li>Set up data infrastructure and promote data governance</li> <li>Introduce apps featuring data protection and privacy (DPP)</li> <li>Offer digital education to all employees</li> </ul>	Information Technology (IT) / Digital Transformation (DX) (p.27) O&M Engineering (p.35)	9 HEROMANIA 12 HEROMANIA 13 HEROMANIA 13 HEROMANIA 13 HEROMANIA 13 HEROMANIA 13 HEROMANIA 14 HER
8	Empower diverse talent	Develop and implement human resource strategies linked to business strategies and goals  Evolve and expand mechanisms to attract diverse talent (e.g., broaden the pool of new graduate and mid-career candidates and strengthen partnerships with educational institutions)  Establish systems that promote self-driven career development (e.g., create structures for skill advancement and career paths, provide consultation services, and expand internal promotion efforts)  Build an attractive workplace (e.g., better define employee jobs and expectations, introduce new remote work options)  Realize borderless human resources (e.g., unify policies across all JERA Group companies and increase global mobility irrespective of hiring location)  Emphasize diversity and inclusion (e.g., foster activities that empower women, employ persons with disabilities, and promote LGBTQ+ understanding)  Increase the percentage of women in leadership positions, targeting 15% in officer positions and manager representation equivalent to the overall employee global engagement across group companies, establishing and spreading an employee value proposition (EVP) that resonates within and beyond the company	Talent Development (p.56) Diversity and Inclusion (p.57) JERA Work Design (p.62) Human Rights (p.63)	5 there is a supervision of the
9	Create a safe and comfortable work environment	<ul> <li>Improve safety levels and work toward zero accidents</li> <li>Boost safety awareness among all employees</li> <li>Build a robust safety infrastructure that promotes safety at JERA Group companies in Japan and abroad and reinforces collaboration with stakeholders</li> <li>Implement the measures needed for a safe workspace (e.g., augment safety information available online, construct a database of safety incidents, and design effective procedures targeting a zero-accident environment)</li> <li>Establish contingency plans for overseas operations</li> <li>Formulate safety management system standards for normal operations</li> <li>Promote work-life balance</li> <li>Maintain stress check levels for employees in Japan below the 100-point national average</li> <li>Strive to reduce the number of abnormal test results during periodic employee health checkups</li> </ul>	Communication with Employees (p.61) JERA Work Design (p.62) Safety and Health (p.66) Stakeholder Engagement (p.68) Risk Management (p.72)	3 AND MELTING



## Information Technology (IT) / Digital Transformation (DX)



### Accelerating JERA Group's DX to Achieve a **Zero-Carbon Society**

JERA aims to become a Japan-based global energy company through the promotion of operational efficiency, work sophistication, and creation of new business value by utilizing cutting-edge technologies and data in order to realize a carbon-free society.

Over the past several years, we have focused on developing common global infrastructure, including the first attempt at full cloud migration in Japan's energy sector, consolidating legacy systems inherited from shareholder companies, developing systems needed to respond to key business issues, and improving operational efficiency.

Going forward, we will continue to drive digital transformation within the JERA Group by building platforms capable of launching new business models conducive to realizing a carbonfree society and acquiring cutting-edge technologies through partnerships and investments.

Digital talent is essential to realize these goals. We will work as "One Team" to strengthen the recruitment and development of digital talent not only for ICT division but for the entire group.



Sami Ben Jamaa Senior Managing Executive Officer Global CIDO (Chief Information and Digital Officer) ICT

## **Key Initiatives and Topics**

#### **Digital Transformation (DX)**

Initiatives that contribute to the creation of new business value



Establish service infrastructure for developing renewable energy (PV, offshore wind, battery storage, etc.)



Invest in cutting-edge technology companies



Obtain DX certificate authorized by the Ministry of Economy, Trade and Industry (METI) of Japan

\*DX certification verifies that the company is ready to transform its business digitally (DX Ready)



#### Digital Integration (DI)

Initiatives that contribute to the advancement of existing businesses



Consolidate and modernize legacy systems inherited from shareholder companies



Visualize the entire value chain for supply-demand optimization and energy stability



Promote digital power plant project to advance power plant operations



Visualize entire investment-related business

#### **IT System Infrastructure**

Initiatives that contribute to the operational efficiency and work style reforms across the entire group



Full cloud computing (cloud-first) Strengthen cybersecurity



Build corporate management infrastructure Redesign payroll system Introduce electronic contract

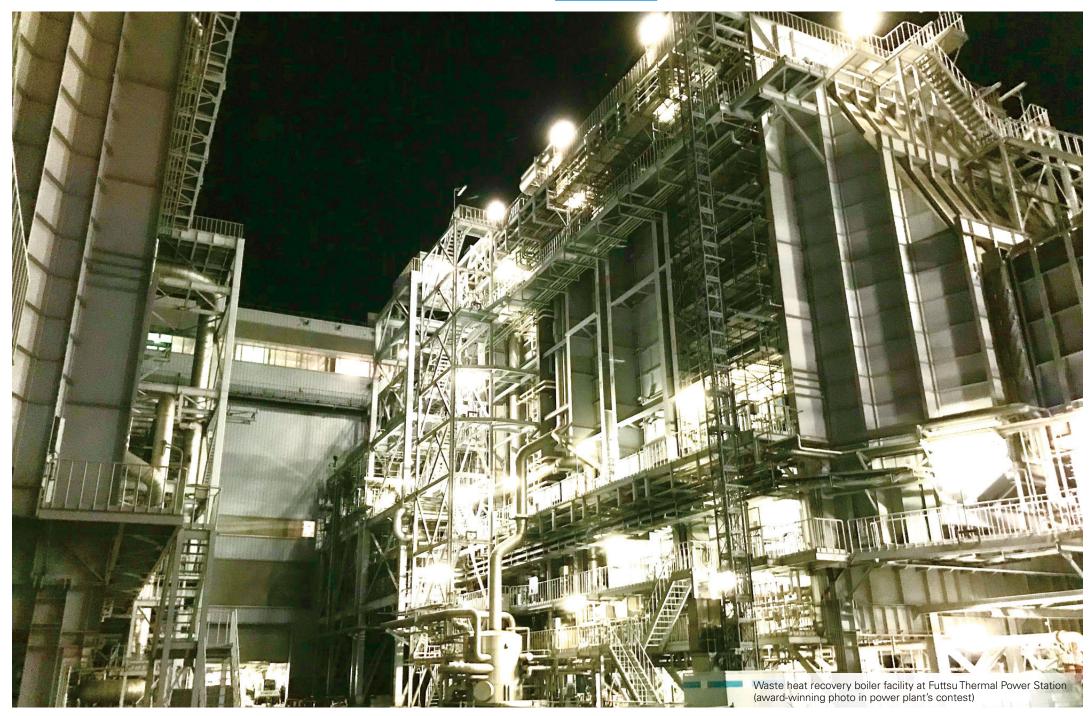


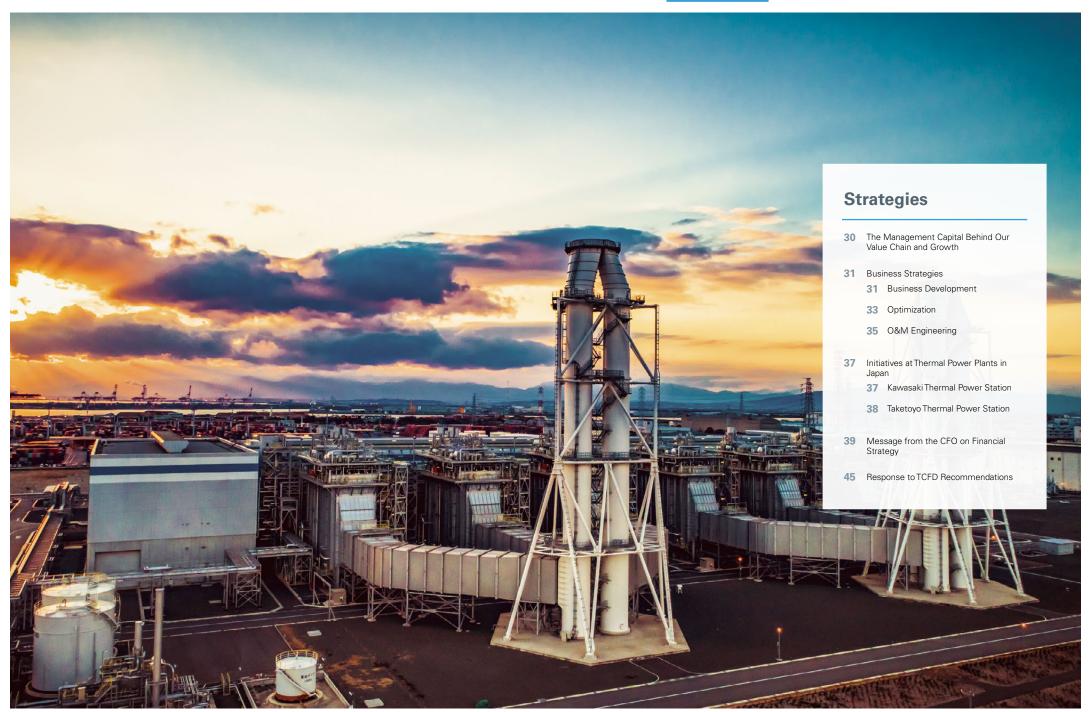
Build data platforms and system-to-system data linkage

#### **Talent Development**

**Establish DX talent education program** targeting all employees of more than 5,000 employees including JERA Group company employees





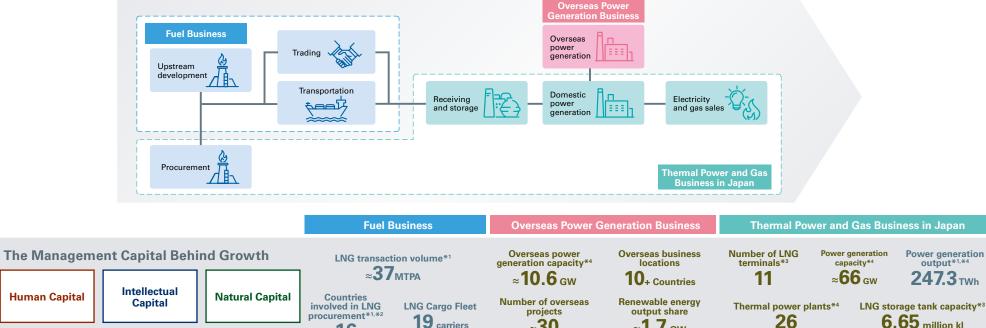




## The Management Capital Behind Our Value Chain and Growth

There are three areas of the company that manage JERA's value chain framework: Business Development, which devises and operates several projects on a global scale; Optimization, which is responsible for establishing the best possible energy operations throughout the value chain; and the pairing of O&M (operation and maintenance) and Engineering (development and construction), which is located in Japan's Kanto and Chubu regions to provide a stable power supply to the country.

The relationships between these three business areas and our three business segments—fuel, overseas power generation, and domestic thermal power and gas—are as follows:



		lutelle steed		≈ <b>3/</b> MTPA		$\approx 10.6  \text{GW}$ 10+ Countries		11 ≈66 gw		<b>247.3</b> TWh	
	Human Capital	Intellectual Capital	Natural Capital	Countries involved in LNG procurement*1,*2	LNG Cargo Fleet 19 carriers	Number of overseas projects ≈ 30	Renewable energy output share ≈ 1.7 GW	Thermal power plan		LNG storage tank capacity*3 6.65 million kl	
	Financial Capital	Manufacturing Capital	Social Capital	Number of employees*5	employees*5	Net sales*6 2,995.5 billion yen	Number of employees*5	Net sales*6 <b>4.1</b> billion yen	Number of employe 3,969		Net sales*6 ,119.4 billion yen
	Business evelopment (p.31)	We are building an optimal increasing earnings by exp of the value chain through development and restructu	anding the scale and scope new business	Fuel upstream / LNG procurement / transportation		Development of overseas power generation, value chains, and renewable energy		Domestic power generation			
C	Optimization (p.33)  We aim to achieve efficient, optimal operation by consolidating and controlling the entire energy value chain, from fuel procurement and transportation to power generation and electricity and gas sales.		Short-term fuel procurement / trading				Elec	tricity and gas	sales		
	O&M Engineering (p.35)  We ensure the safe, affordable, and flexible operation of our fuel-receiving and storage terminals and thermal power plants.								)&M Engineeri al and third-pa	•	

As of March 31, 2022

<sup>\*1.</sup> As of FY 2021 \*2. Represents the number of countries that exported LNG to our terminals \*3. Includes joint projects with other companies in Chita and Yokkaichi \*4. Includes in-progress construction. Domestic figures exclude joint thermal power holdings.

<sup>\*5.</sup> Does not include corporate employees \*6. Total net sales when reconciled: -1,683.8 billion yen

## **Business Strategies**

## **Business Development**

#### **Our Business Mission**

We are a group of project development and asset management professionals who are globally expanding our renewable energy business, as well as our LNG value chain business, from fuel upstream operations to power generation. We are also up and running with initiatives in the hydrogen and ammonia business focused on achieving a decarbonized society. We are already working on various projects in Japan, Asia, North America, Australia, Europe, and the Middle East. The business environment surrounding energy is rapidly changing in terms of policies, supply and demand structures, and business models in each region, and there have also been remarkable advances in decarbonization-related technologies. In this business environment, it is important to have a customer-driven perspective that captures the circumstances and needs in each country, as well as to find solutions and areas for improvement by having diverse talent from around the world bring their ideas and know-how to the table to engage in frank discussions.

Going forward, we will provide cutting-edge solutions in Japan and other countries by leveraging cross-regional collaboration and the knowledge and expertise we have gained from our projects. At the same time, we will work with like-minded partners in Asia, where growth is particularly rapid, to contribute to the stable supply and decarbonization of energy.



Yukio Kani Corporate Vice President and Managing Executive Officer, Director **Business Development** 

#### **Opportunities**

- Global trend toward decarbonization
- Growing energy demand, especially in Asia
- Expansion of development opportunities for renewable energy and low/carbon-free thermal power
- Technological advances toward zero-emission thermal power

#### Risks

- Increased uncertainty in global energy policies and supply-demand structures
- Increased geopolitical risk
- Delays in establishing an environment for realizing zero-emission thermal power

#### **Strengths**

- · One of the world's largest LNG transaction
- Extensive value chain, from fuel upstream activities to power generation and sales
- Credibility from having been selected by partners from around the world seeking a company engaged in large-scale business development

#### Measures Related to Our Business Strategy

#### Building a decarbonized fuel supply chain

We are engaged in collaborative work to build and expand supply chains for hydrogen and ammonia, which are decarbonized fuels. We are also engaged in international bidding to procure ammonia and carbon capture and storage (CCS) efforts.

#### **Developing renewable energy**

We are promoting large-scale renewable energy by setting the goal to develop 5 GW of capacity by FY2025 and participating in offshore wind and solar power generation in Japan and abroad.

#### Establishing roadmaps for decarbonization in Asia

We are conducting research, providing support, and collaborating with partners to establish decarbonization roadmaps tailored to the different environments in each country.

#### Providing a stable supply of electric power in Japan

We are contributing to a stable power supply by replacing older thermal power plants with high-efficiency ones and restarting idle thermal power plants when the supply-demand balance is tight. We are also developing our fuel upstream business and concluding long-term contracts to ensure a stable LNG supply.

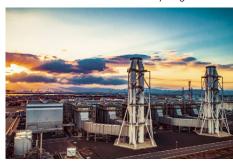
#### **FY2021 Milestones**

- Collaboration and investment to build and expand our hydrogen and ammonia supply chain (Japan, Australia, the US, and other countries)
- Environmental impact assessment procedures for offshore wind power in Japan (Akita and Yamagata prefectures)
- Basic agreement on business alliance with West Holdings Corporation for domestic solar energy development
- Research and support toward developing a decarbonization roadmap for Indonesia's power sector
- Restarting idle thermal power plants to ensure supply capacity (Anegasaki Thermal Power Station Unit 5 and Sodegaura Thermal Power Station Unit 1)
- Development of fuel upstream business (acquisition of a stake in Australia's Barossa gas field and investment in Freeport LNG in the US)

#### **Domestic Power Generation**

In an effort to both enhance our domestic competitiveness and reduce environmental impact, we are taking initiatives that include taking the infrastructure of our existing thermal power generation facilities and rebuilding maximum-efficiency models, adopting cutting-edge exhaust gas treatment equipment, and spearheading the introduction of carbon-zero hydrogen and

ammonia fuels. We are also working to deliver a portfolio of power solutions consistent with energy and environmental policies and achieve a balance between the stability and sustainability of our energy supply.



#### **Renewable Energy**

We aim to become the number one company in Asia for offshore wind power, which is expected to grow significantly in the future. Currently, we have several projects at different stages in Taiwan, and in the future, we will strengthen our efforts to win contracts for projects in Japan, expand our business to other countries, and work on the new technology of floating offshore wind. In addition to offshore wind power, we will actively pursue our solar power generation business in Japan and expand our solar and onshore wind power

generation businesses in North America, India, and other countries. At the same time, we will also work on battery storage solutions in each country, which will contribute to stabilizing the supply-demand balance.



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

We have approximately 30 projects in more than 10 countries around the world. and we are utilizing the experience we have gained from each of them to engage in business development. Our aim is to expand development through strategies tailored to the needs of each market in North America, Asia, and the Middle East. In addition, we believe the key to our future growth will be seeking

out gas-to-power projects, which integrate everything from fuel procurement to power generation.



#### LNG and Next-Generation Fuel Value Chain

The LNG business has a transaction volume of  $\approx 37$  million tons per year. We participate in the entire value chain from upstream development to transportation, trading, and power generation, and we strive to secure a stable and competitive LNG supply. By leveraging our expertise in LNG and the world's largest off-take capacity, we aim to build a supply chain for hydrogen and ammonia to achieve zero-emission thermal power generation, supply it to other industries, and expand our business globally.



#### **Main Business Indicators**

Domestic replacement and development Steady progress toward development of

≈ **I** GW of capacity at 5 sites

Renewable energy output share

**1.7**<sub>GW</sub>

LNG procured by upstream business

**12** MTPA

#### **Featured**

Strengthening Our Offshore Wind Power Generation Business

We are investing in overseas projects in various stages of operation, construction, and development to simultaneously acquire the know-how necessary for the development of our offshore wind power business. We are also hiring professional talent that includes managers of offshore wind power development companies from Europe, a leading market for such projects.





## **Business Strategies Optimization**

#### **Our Business Mission**

In order for us to properly conduct our business and continue to meet the expectations of our stakeholders, it is essential that we engage in smooth value chain management from fuel procurement to transportation, receiving, power generation, and sales. We will enhance our execution capabilities in each of the business areas that make up the value chain while, at the same time, creating new services and providing solutions to our customers, and we will take a bird's eye view of the entire value chain to manage risk appropriately within the ever-changing business environment.

Backed by one of the largest fuel transaction volumes in Japan, we have built a strong and extensive network in the global market. The business environment is undergoing significant changes, including fuel market volatility resulting from shifting international conditions and increasingly complex power operations due to the introduction of diverse power sources. However, we will help realize a society that can grow sustainably by solving challenges and continuing to provide a stable energy supply through flexible responses throughout the value chain.



Sunao Nakamura Senior Managing Executive Officer Optimization

#### **Opportunities**

- · Expansion of competition in electricity and gas sales
- Market creation and new system introductions
- · Fluctuations in resource prices
- Fluctuations in domestic electricity demand

#### Risks

- Lack of coordination with the expansion of renewable energy
- Negative impact of geopolitical risks on fuel procurement
- · Tight domestic electricity supply and

#### Strengths

- Competitive and flexible procurement portfolio
- Extensive market intelligence centered on **JERAGM**
- Expertise in electricity and gas market transactions
- Flexibility in LNG terminal and power plant operations and fuel receiving
- One of the world's largest LNG transaction volumes

#### Measures Related to Our Business Strategy

#### Taking action to ensure stable supply

We are working to optimize the entire value chain in order to minimize the impact of growing power demand fluctuations caused by recent uncertainties. Our efforts include maximizing thermal power generation and fuel operations and utilizing trading networks by means of JERAGM. In preparation for times of peak power demand, we will continue to strengthen our response systems and participate in national efforts to prevent supply issues. Our efforts include coordinated capacity adjustments, participation in public auctions to secure extra power capacity, cooperation in national fuel monitoring plans to better verify the risk of power shortage, new entry into adjustment markets, and better utilization of the existing power market.

#### Strengthening supply stability and securing profitability through fuel trading

We are enhancing our optimization through JERAGM. By engaging in trade that connects the Pacific and Atlantic markets, we are able to flexibly address Japan's massive and fluctuating demand for LNG and coal while also efficiently seizing profit-earning opportunities in the market by leveraging our commercial flow. In this way, we are able to achieve both enhanced fuel supply stability and profitability.

#### **FY2021 Milestones**

#### Optimal power generation and fuel operations

- Actual fuel transaction volume in FY2021: 37 million tons of LNG and 43 million tons of coal
- In FY2021, we procured a record-high additional 4.5 million tons of LNG through JERAGM and took various measures, including securing and maintaining a large LNG inventory.
- During times of peak demand in Japan, we operated multiple power plants at increased output in accordance with instructions from power transmission and distribution companies.

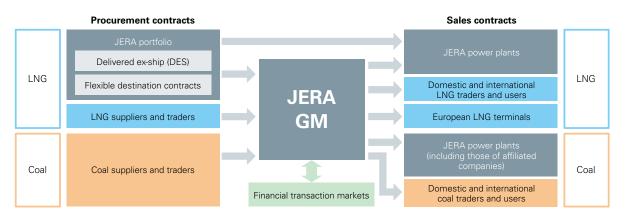
#### Entry into new markets

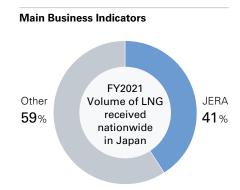
- We placed bids in new adjustment markets and offered power through the markets.
- We used the futures market as a risk-hedging instrument and executed futures contracts.

Strategies

#### JERAGM's Role in Fuel Trading

We pursue arbitrage profit by leveraging contract flexibility and market intelligence while meeting our volume fluctuation needs.





#### **Short-Term Fuel Procurement**

We have built a fuel portfolio with excellent short-term price competitiveness that also responds well to volume and price fluctuation risks by leveraging our world-class procurement capabilities. ("Short-term" in terms of LNG means four years or fewer.) Competitive fuel procurement allows us to contribute to the supply of inexpensive electricity and gas in Japan, and we are working on expanding our fuel trading business based on the flexibility we have gained.



#### **Fuel Trading**

JERAGM is headquartered in Singapore and has locations in London, Amsterdam, Tokyo, and Baltimore. Via this joint venture and its ≈ 300-strong team, we engage in trading operations in the LNG, coal, and freight markets. We also look to optimize the entire value chain through asset-backed trading supported by the breadth of world-class fuel procurement covered by JERA and our French colleagues at EDF.



#### **Electricity and Gas Sales**

We are able to meet the diverse needs of our customers and provide a stable supply of electricity and gas by manifesting supply capabilities backed by our track record and experience in large-scale fuel contracts and operations. We also contribute to a stable domestic power market by supplying as much electricity as possible to the wholesale market. Furthermore, we play a role in the future of the domestic power market through participation in new markets, such as the capacity and adjustment markets.



## **Business Strategies**

## **O&M** Engineering

#### **Our Business Mission**

O&M Engineering is a unit of ≈ 3,000 engineers who have been delivering electric power for years through power plant and fuel terminal operation and maintenance (O&M). We coexist with local communities and will continue to support manufacturing and provide a comfortable way of life in our communities.

We have developed the "JERA O&M Way," which achieves both cost competitiveness and market responsiveness by combining our digital strengths with the kaizen and technological strengths we have cultivated through our experience providing a stable power supply. By continuing to refine this approach, we aim to achieve plant O&M services that are overwhelmingly superior to our competitors in Japan and overseas. Furthermore, we work to transform our operations through digital power plants and to achieve zero-emission thermal power toward a decarbonized society, and we pursue these initiatives and others with safety always as our highest priority.

By deploying these efforts as part of the JERA O&M Way, we aim to become a world-class O&M player able to offer our customers enhanced value.



Tetsuya Watabe Senior Managing Executive Officer O&M Engineering

#### **Business Strategy Assumptions**

#### **Opportunities**

- Electric power market competition
- Expansion of digitization
- Expansion of renewable energy
- Support for zero-emission thermal power

#### Risks

- · Risk of natural disasters such as major earthquakes
- Disruption of operations caused by equipment problems or accidents

#### Strengths

- A group of engineers with the experience and expertise to meet complex challenges
- Opportunities and experience operating an abundant power supply portfolio

#### Measures Related to Our Business Strategy

#### Safety Initiatives

As the world's first company to take on the challenge of fuel ammonia, we will leverage our experience with Japan's largest existing thermal power operations to establish world-class safety practices and provide an infrastructure for supplying clean energy to Asia and the world

#### Zero-Emission Thermal Power Initiatives

We will accelerate our efforts to launch fuel ammonia tests at Hekinan Thermal Power Station Unit 4 at a co-firing rate of 20% during FY2023. This will be a world first for a large commercial unit and help progress toward a decarbonized society by demonstrating our technical capabilities throughout the zero-carbon fuel value chain.



#### **Digital Power Plant Promotion**

We will promote the implementation of digital power plants. which provide higher lifecycle value by using the power of the cloud to gather information on the plants and their employees,

analyze real-time data on variables like facilities status and market trends, and deliver quick and agile operational responses based on Al forecasts



#### **Supply Security Initiatives**

In our position as Japan's largest power producer, we look to ensure a stable power supply through measures that include steady operation of our active power plants, restarting idle thermal power plants during peak demand, and adaptive responses to regular inspections.

We will also contribute to maintaining the stability of the power system by operating an optimal portfolio to cope with supply-demand fluctuations associated with the expansion of renewable energy sources.



#### **FY2021 Milestones**

#### **Safety Initiatives**

Based on our safety strategies for going global, we promoted zero-accident principles, assigned dedicated safety personnel to all construction sites and power plants, utilized digital tools to communicate, and began publishing the frequency of accidents to visualize the level of safety.

#### Zero-Emission Thermal Power Initiatives

We launched small-scale fuel ammonia tests at Hekinan Thermal Power Station Unit 5 in preparation for the planning and design of large-scale co-firing demonstration tests at Hekinan Thermal Power Station Unit 4

### **Digital Power Plant Promotion**

To make our digital power plants a reality, we developed apps in-house, from verification and validation to the collection of big data. We applied Al-based boiler operations optimization recommendations to actual power plant equipment to reduce fuel consumption and CO2 emissions.

#### **Supply Security Initiatives**

In addition to conducting priority inspections before times of peak demand, we resumed operation of Anegasaki Thermal Power Station Unit 5, which had been under a long-term planned shutdown, and adjusted regular inspections to ensure additional winter supply capacity ahead of the tightening supply-demand situation.



### Our Facilities in Japan

Number of power plants 26

Number of LNG terminals

8 (excluding jointly operated terminals)

Power generation capacity

**66** GW

# **Experience and Talent Are the Keys to JERA's Business**

#### Engineering

Through the expertise gained from designing a wide variety of large-scale power plants, we seek to optimize our plant design in line with JERA best practices and achieve enduring facility reliability and reduced construction costs.



#### Operations

We feature flexible and agile operation at our power plants, LNG terminals, and other facilities thanks to our experience providing a stable power supply. For instance, we have improved equipment reliability by reducing and preventing equipment failure and expanding our fuel offerings. In addition, we are exploring the use of the Internet of Things (IoT) for remote supervision and predictive management possibilities.



#### Procurement

We are working to reduce costs in all manner of equipment and material procurement through several efforts, including the pursuit of global best practices via market research and cost analysis, innovation in ordering methods, new supplier outreach, and the utilization of third-party products and services. We are also promoting responsible procurement that is ESG-conscious.



We are able to both reduce costs and maintain facility reliability even beyond their design life by applying O&M Engineering capabilities cultivated through many years of experience maintaining power plants and LNG terminals. We will also improve market responsiveness and reduce operating costs by shortening the time needed for regular inspections through on-site kaizen.





# **Initiatives at Thermal Power Plants in Japan**

# **Kawasaki Thermal Power Station**



Kawasaki Thermal Power Station is a state-of-the-art power plant that uses environmentally friendly liquefied natural gas (LNG) and achieves the highest standards of performance due to its combined cycle power generation system with gas and steam turbines. Group 2 Units 2-2 and 2-3 (MACC II) achieved a combustion gas temperature of 1,600°C and further improved performance, reducing both fuel consumption and CO2 emissions by around 30%.

Power generation equipment		Output (MW)	Fuel	Start of operation	Type of power generated
	Unit 1-1	500		February 2009	
Group 1	Unit 1-2	500		June 2008	
	Unit 1-3	500	LNG	June 2007	Combined
	Unit 2-1	500	LING	February 2013	cycle
Group 2	Unit 2-2	710		January 2016	
	Unit 2-3	710		June 2016	

#### **Coexisting with Local Communities**



Steam supply pipe



Power plant tour

# Supplying Heat to Neighboring Factories

A portion of the steam used to generate power is supplied to neighboring companies through pipes laid in the area. The effective use of this steam helps save energy and reduce CO2 emissions throughout the entire region when compared to each company producing steam independently.

#### **Power Plant Tours**

In addition to in-person tours, Kawasaki Thermal Power Station has offered online tours since 2020 as a measure to prevent the spread of COVID-19. The online tours have allowed people to participate remotely from their homes and have been well-received. In FY2021, 382 people joined the in-person tours, and 1,213 people participated in

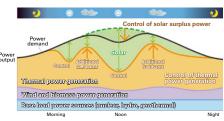
### **Contributing to Stable Supply**

Combined cycle power generation fueled by LNG is highly adaptive to load changes in electricity demand compared to other forms of thermal power generation. This means that output can be adjusted significantly in a short period of time; for example, output can be raised from 50% to full capacity in as little as 10 minutes.

Currently, Kawasaki Thermal Power Station also plays a role in adjusting output according to fluctuations in power generation from renewable energy sources, which are affected by weather and other factors, thereby contributing to a stable supply of electricity on a daily basis.



Equipment inspection



Source: "10 questions for understanding the current energy situation in FY 2021 version," available on the Agency for Natural Resources and Energy website

Kawasaki Thermal Power Station was the first power plant in eastern Japan to implement the Toyota-style kaizen system for inspection and maintenance operations to improve power generation facility performance. The plant has achieved a significant reduction in maintenance time through three basic pillars for optimizing regular inspections: (1) off-line setup, (2) simultaneous operation, and (3) refinement.

This system enables us to promote the operating rate of the highly efficient Kawasaki Thermal Power Station and reduce operations at inefficient thermal power plants, thereby achieving overall optimization of operations at our thermal power generation facilities and contributing to the reduction of fuel costs and CO2 emissions. JERA was the first power generation company to adopt this kaizen approach internally, and now, after further study. we have developed our own "JERA-style kaizen" to further improve on this approach.

### On-Site Impressions



Hiroki Takeuchi O&M Meter Unit Kawasaki Thermal Power Station

My primary responsibilities include maintenance of instrumentation controls systems, which is essential for the safe operation of Kawasaki Thermal Power Station, a leading digital power plant (DPP) running on thermal power. I also handle the disconnection and reconnection of equipment required for performing maintenance. I play a key role in exploring ways to work with and integrate digital technology within the power plant. I find it very exciting and rewarding to work together with other key players from different departments on unprecedented tasks, such as improving inspection apps and establishing operational workflows.

I am very proud to work as part of "Team Kawasaki" at Kawasaki Thermal Power Station. We really come together as a team when problems arise and put every effort into resolving them guickly. I'll continue to bring a sense of endeavor and a commitment to stable power supply to my work every day.

# **Initiatives at Thermal Power Plants in Japan**

# **Taketoyo Thermal Power Station**



The Taketoyo Thermal Power Station is located in a temperate natural environment at the center of the Chita Peninsula in Aichi Prefecture, at the mouth of Kinuura Bay, northwest of Mikawa Bay.

Unit 1 started commercial operation in 1966, with Units

Power generation equipment	Output (MW)			Type of power generated
Unit 5	1,070	Coal Woody biomass	August 2022	Steam power

2 through 4 following in 1972, and they each played a major role in providing a stable supply of electric power to the Chubu region. The plant has since been converted into a high-efficiency coal-fired power plant. Beginning in August 2022, it incorporated co-firing of woody biomass fuel to offer a stable long-term supply of electric power, reduce the cost of power generation, and improve environmental performance with the introduction of state-of-the-art equipment.

#### Introduction of Woody Biomass Facilities: Achieving Both a Stable Supply and **Reduced Environmental Impact**





Wood pellet mill

Wood pellet burner

Taketoyo Thermal Power Station uses highly efficient ultrasupercritical (USC) pressure power generation equipment, the best technology available for coal-fired power generation, and has a capacity of 1,070 MW, one of the largest single-unit outputs in Japan.

We are also working to improve environmental performance by co-firing woody biomass fuel. From the mill pulverizing the fuel into fine powder to the burner serving as combustion equipment, the facilities exclusively use woody biomass, ensuring a high co-combustion ratio (co-firing rate of 17%) and further reducing CO<sub>2</sub> emissions (≈ 0.9 million tons per year).

#### What is woody biomass?

Woody biomass is an environmentally friendly, carbonneutral fuel made from pellets of waste wood generated during sawmilling (wood that cannot be used for construction, furniture, or other such applications). The indoor coal storage area can hold ≈ 0.07 million tons of woody biomass fuel.







Indoor coal storage area

#### **Environmental Initiatives**



Above: Enclosed conveyor belt Top right: Indoor coal storage area



#### Measures for Dust Control

We are striving to control dust through measures such as adopting an indoor coal storage area designed with the smallest possible openings and using an enclosed structure for our discharge conveyors and fuel-receiving operations.

#### Measures for Noise Control

We have implemented measures for noise control to protect the surrounding area, including installing noise barriers around boilers, employing low-noise equipment, and installing sounddeadening devices.

#### Reuse of Coal Ash and Gypsum

We effectively use the coal ash (cinders and particulate matter) generated from burning coal and the gypsum produced by exhaust gas desulfurization equipment as fuel for cement production, material to make building boards, soil improvement additives, and more.

#### Message from the Plant Manager



Masato Ishimura General Manager, Head of Taketovo Thermal Power Station\*

\* as of March 31, 2022

For more than half a century since Unit 1 started operation in 1966, our plant has fulfilled its role of contributing to society through stable, inexpensive power supply while maintaining safety as our top priority. To continue to fulfill that role in the long term, the plant underwent renovations to adopt state-of-the-art technology in August 2022.

Given the plant's location next to a residential area, various environmentally friendly measures were taken to prioritize the safety of local residents and ensure that replacement work could continue with their understanding. Despite major delays in equipment and material delivery and restrictions on the entry of instructors from abroad due to the COVID-19 pandemic, we applied our kaizen approach to complete the project successfully with our construction affiliates in the spirit of "One Team JERA."

Going forward, we are dedicated to maintaining safety in the operation of thermal power generation equipment while maintaining high efficiency and low environmental impact through woody biomass co-firing. In doing so, we hope to contribute to a stable power supply and cherish the goodwill shown by the local community.

Noise barrier



# **Review of Our Business Plans Announced in April 2019**

#### Consolidated net income

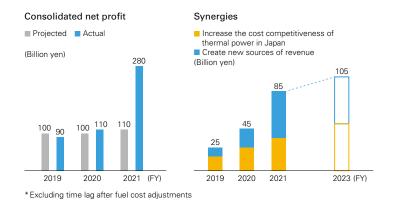
In JERA's business plan unveiled in April 2019, we set a target of 200 billion yen in consolidated net profit by FY2025 (excluding time lag\*). Although we booked losses attributable to temporary factors such as selling excess LNG and the impacts of the pandemic during the three-year period through FY2021, consolidated net profit for the period was essentially at the level set out in the business plan. The figure for FY2021 was 277 billion yen, well above our target of 110 billion yen. This was due to the ability of JERA Global Markets (JERAGM), a subsidiary in Singapore engaged in trading, to increase profits by capturing the volatility of resource prices while enhancing supply stability.

\*Profits or losses attributable to delays between fuel price fluctuations and when they are eventually reflected in sales prices

#### **Synergies**

In our previous business plan, we set out the goal to create synergies worth of at least 100 billion yen per year within five years of integrating our existing thermal power generation and other businesses; in FY2021, we created synergies worth of 85 billion yen.

We will continue to pursue this goal by proactively increasing the cost competitiveness of thermal power in Japan and creating new sources of revenue.

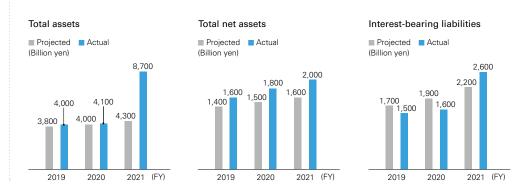


#### Balance Sheet

Total assets increased substantially in FY2021 (compared to the previous two fiscal years) due to higher resource prices in the market value of outstanding fuel and financial transactions, which are recorded by JERAGM as "derivative receivables and payables" in accordance with Singapore accounting standards. Continued monitoring is warranted because subsequent changes in resource prices may cause the amount to fluctuate widely.

Interest-bearing liabilities also increased compared to the business plan because we secured financing in FY2021 for: (1) short-term working capital in response to increasing losses attributable to the lag after recent hikes in resource prices; (2) procuring additional fuel at spot prices to stabilize our supply; and (3) investing in growth in North America and Asia.

On the whole, our total net assets align with the original plans.



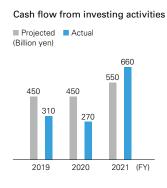
#### **Cash Flow**

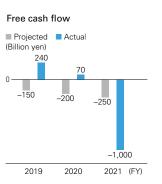
Through FY2020, we were cash flow positive—operating cash flow exceeded our projections while cash flow from investing trailed behind. However, in FY2021, our free cash flow was ≈ -1,000 billion yen, mainly because operating cash flow was ≈ -340 billion yen due to temporary factors such as losses attributable to lags and JERAGM increasing their reserve for deposits. Additionally, cash flow from investing increased to ≈ 660 billion ven due to major investments occurring during the period, namely in Freeport LNG (US) and Aboitiz Power (Philippines).

In response, we are striving to stabilize our finances by securing financing through various means. We have borrowed from financial institutions and issued commercial paper (CP) in addition to issuing straight bonds totaling 150 billion yen on six occasions through FY2021.

We are also seeking to further diversify our sources of funding to ensure consistent capital for expenditures that help us stabilize our supply of electricity, invest in growth, and decarbonize. Specifically, we have increased our allotment for CP, concluded foreign currency loans, and issued corporate bonds and transition bonds in US dollars since the fiscal year began. We are also securing transition-linked financing and taking other steps to secure consistent, fit-for-purpose funding.

# Operating cash flow ■ Projected ■ Actual (Billion yen) 250 2021 (FY) 2019 2020







CFO Sakairi in discussion with members of the Financial Strategy and Planning Group

# Formulating New Management Targets and Financial Strategy for FY2025

This past May, we formulated and announced new management targets for FY2025 with the aim of growing sustainably and enhancing our corporate value by (1) promoting JERA Zero CO2 Emissions 2050 and (2) expanding global business while contributing to the consistent supply of electricity, even amid substantial changes to the circumstances surrounding the energy industry of late.

Corporate value must be enhanced sustainably, and we view disciplined growth as essential toward that end. Accordingly, we expounded the discipline we seek in the new management targets, which we announced as the financial strategy to lead us to FY2025.

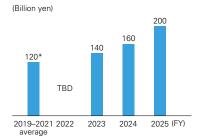
We believe these management targets and financial strategy will serve as key indicators for demonstrating our vision to our stakeholders.

# **New Management Targets Profit and Expenditures**

The target remains the same as the original business plan: 200 billion yen by FY2025.

However, we now present profit targets for each fiscal year through FY2025, something we had not indicated previously. Notably, we have yet to set exact targets for FY2022 because the situation in Russia / Ukraine and other developments have cast uncertainty

# Consolidated net profit



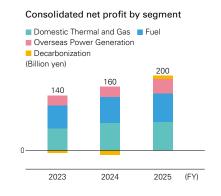
<sup>\*</sup> Excluding time lag after fuel cost adjustments

on the future of resource prices and electricity sales, making it impossible to properly calculate our results at this time.

#### **Profit and Expenditures by Segment**

To better visualize how consolidated net profit will increase, we also present our projections of profit and expenditures by segment. In addition to increasing revenues from each segment, we strive to maximize synergies between segments by managing our asset portfolio, optimizing our value chain, and improving our trading performance.

Notably, we expect ≈ 80% of the FY2025 net profit target of 200 billion yen to come from projects in which we have already invested. Therefore, we believe we have already reached a level at which the target is attainable.



#### Indicators for Profitability, Capital Efficiency, Growth Potential, and Financial Health

We formulated the new management targets for FY2025 in terms of profitability, capital efficiency, growth potential, and financial health.

For the profitability indicator, we added a target EBITDA of 500 billion yen to the consolidated net profit target of 200 billion yen. We set this target to assess and manage the cash creation capacity of cash flow businesses, namely JERAGM's capacity for fuel volume adjustment.

For the capital efficiency indicator, we set targets for ROIC, which shows the earning capacity of our asset businesses, and WACC, which represents our cost of capital. The following are two points we want all stakeholders to understand about capital efficiency.

The first is that we intend to expand the spread between our ROIC and WACC. Specifically, we aim to increase the spread to 1% by FY2025, double the average spread of ≈0.5% from FY2019 to FY2021. We hope to achieve this to increase our EVA and enhance our corporate value.

The second point is that we are aware that expansion in our business domains and geographic areas will increase the cost of capital (WACC) that underpins our enterprise.

We expect our fuel and overseas power generation businesses to comprise a greater proportion of our income from now through FY2025, and thus anticipate a higher WACC as the structure of our business changes. We believe it is necessary to improve our earning capacity to enhance our corporate value even as we project a higher WACC.

For the growth potential indicator, we have set out what we consider to be an eminently achievable target of 1,400 billion yen, the total capital expenditure planned from FY2022 to FY2025.

We set this target to maintain our focus on achieving sustained growth and to avoid falling into a temporary state of balanced contraction, a disadvantage of using ROIC wherein investments in longer-term growth are withheld in anticipation of short-term gains.

For the financial health indicator, we set targets for net debt-to-equity and net debt-to-EBITDA ratios to demonstrate our intent to operate under financial discipline. We will explain this point further in the "Financial Strategy" section below.

Achieving these well-balanced financial indicators—and ensuring that they stay well-balanced will allow us to enhance our corporate values sustainably.

#### **New Management Targets**

	Performance indicators	FY2019–FY2021 average	FY2025 target
Drofitobility	Net profit*	120 billion yen	200 billion yen
Profitability	EBITDA*	350 billion yen	500 billion yen
Canital officianas	ROIC*	≈ 3.5%	≈ 4.5%
Capital efficiency	WACC	≈ 3.0%	≈ 3.5%
O	CEL	FY2019-FY2021 total	FY2022-FY2025 total
Growth potential	CFI	≈ 1,200 billion yen	≈ 1,400 billion yen
Figure stall be able	Net debt-to-equity ratio	≈ 1.0x	1.0x or lower
Financial health	Net debt-to-EBITDA ratio*	≈ 4.0 years	4.5 years or less
	Investments in	FY2019-FY2021 total	FY2022-FY2025 total
	decarbonization	≈ 80 billion yen	≈ 650 billion yen
Information for reference	Co-firing with ammonia	_	20% of demonstration tests completed
reference	Co-firing with hydrogen	_	30% of demonstration tests completed
	ROE*	≈ 7.0%	≈ 9.0%

<sup>\*</sup> Excluding time lag after fuel cost adjustments. Excluding a one-time gain of ≈ 120 billion yen from trading

# **Financial Strategy**

Our financial strategy comprises balance sheet management and capital allocation. To stabilize our supply of electricity in Japan, decarbonize, and achieve global growth centered on Asia, we must expand our renewable energy and domestic power generation businesses (including zero CO2 emissions thermal power generation) in addition to scaling up our business in Asia. We must also

become involved in fuel upstream and transport business across a broader area, including North America, Australia, and the Middle East.

Accordingly, we require strict financial discipline to properly manage our long, cross-border value chain, our trading business that fully leverages the optionality of our value chain, and assets in excess of 10,000 billion yen that underpin our trading business.

To practice financial discipline on this level, we use balance sheet management to maintain and manage our financial health.

Additionally, we turn to capital allocation to indicate our growth-oriented cash flow discipline as well as the distribution of funds and course toward the sustainable growth we seek.

#### **Financial Strategy**

		Now		FY2025
	Safety	_		Net debt-to-equity ratio 1.0x or lower
Optimal capital structure	Debt servicing capacity	_		Net debt-to-EBITDA ratio 4.5 years or less
Balance sheet management  Capital allocation	Credit ratings	A rating		A rating
	Risk capital	_		Amount in excess of total risk exposure
	Distribution of funds	_		Promoting investments for sustainable growth
	Discipline	Ensuring suf	fficient c	pperating cash flow

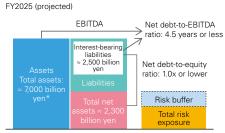
#### **Balance Sheet Management**

We will implement balance sheet management with the goal of maintaining our current financial strength rating of A through FY2025.

Our specific targets are 1.0x or lower for net debt-to-equity ratio, a measure of safety, and 4.5 years or less for net debt-to-EBITDA ratio, an indicator of debt servicing capacity.

These targets allow us to maximize financial leverage without compromising our focus on the discipline to maintain our A rating. We also drew upon our optimal capital structure to calculate these targets.

#### Financial Strategy: Balance Sheet Management



#### \* Including cash and cash equivalents of 300 billion yen

#### Capital Allocation

We expect to create an operating cash flow of 1,580 billion yen over the four-year period from FY2022 to FY2025 and will direct it toward proper balance sheet management without relying excessively on debt.

Next, let me explain our allocation of funds, which indicates the course toward the sustainable growth we seek. We plan to make an aggressive allocation to capital expenditures (CAPEX)—1,400 billion yen of our expected cash flow of 1,600 billion yen, mainly from operating cash flow. By allocating the majority of our cash flow to CAPEX, we aim to promote growth and enhance our corporate value, thereby benefiting our stakeholders.

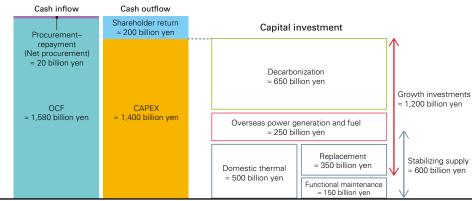
The section on "Capital investment" below provides a breakdown of CAPEX.

First, we plan to allocate 1,200 billion yen to growth sectors through FY2025. We will allocate just over half this amount—650 billion yen—to renewable energy, hydrogen, ammonia, and other decarbonization-related fields to drive efforts toward carbon neutrality while pursuing growth.

We also intend to allocate 600 billion yen to areas that help us stabilize our supply of electricity in Japan. Although some of these areas overlap with growth sectors, these allocations will allow us to maintain our momentum in fulfilling our responsibilities as the largest power generation company in Japan.

#### **Financial Strategy: Capital Allocation**

#### Capital allocation



#### Mechanisms for Ensuring the Effectiveness of Corporate Value Creation

Mechanisms are required to ensure the effectiveness of efforts to enhance our corporate value while striving to achieve our new management targets and financial strategy. We employ three methods—business management, an investment evaluation process, and integrated risk management—to solidify our efforts to enhance our corporate value.

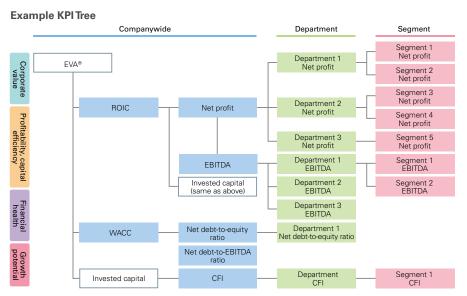
(For more information about the investment evaluation process and integrated risk management, see the subsection titled "Highly Effective Risk Management" in the Risk Management section of the report on p.73.)

#### Business Management

To ensure the effectiveness of corporate value creation, we created a KPI tree for each management target to guide our business management. Each tree features KPIs for the entire company as well as the relevant business departments, segments, and regions.

Before the start of each fiscal year, we set targets and formulate action plans for achieving them for the entire company and across each department, segment, and region.

Then, each quarter, we check the KPIs to see how management is progressing toward achieving the targets and elicit specific points for improvement for the immediate future, which we use to



<sup>\*</sup> This tree is provided as an example of how we set and track KPIs tailored to the characteristics of each department and segment.

undertake subsequent actions, namely management resource allocation and portfolio management.

### **Initiatives for Enhancing Our Corporate Value**

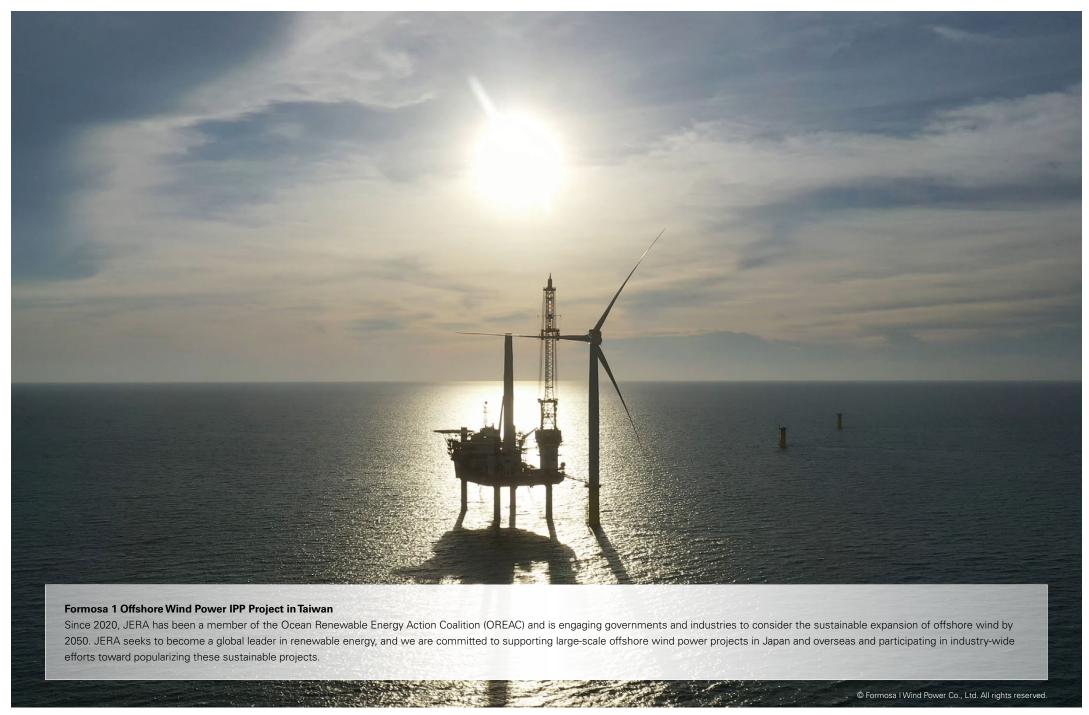
In light of the worldwide push toward decarbonization and other aspects of the global situation, the business environment continues to change with unprecedented speed. The future remains difficult to predict amid the recent surge in resource prices and burgeoning geopolitical risks. Our Finance and Accounting Department, which I oversee as CFO, formulates and announces our financial strategy and management targets for sustaining our creation of corporate value while adapting to these changes. We are proceeding with targeted initiatives to ensure the effectiveness of our efforts to enhance our corporate value, namely advancing our business management and financial and accounting systems, which will become a reliable compass for management to plot their course swiftly and in an agile manner.

Consistent with our belief in the importance of close coordination between our locations inside and outside Japan, the department also holds regular meetings for the CFOs of our overseas locations as well as global meetings for finance and accounting departments with the aim of maintaining close connections and open information sharing.

Additionally, the Finance and Accounting Department forms various teams that function organically. For example, we have a team that manages and studies tax risks, ensuring the rigor of our tax compliance and the appropriateness of our tax payments. Our global finance team positions us to respond to a sudden demand for funds, and our global IR team exists to strengthen our engagement with investors. Our internal financial advisory team provides support for our investments as well as M&As.

Furthermore, we are trying to acquire a diverse range of talent who can thrive in the current business environment. Toward that end, we are accepting transfers from the TEPCO and Chubu groups in addition to empowering women and hiring experts and professionals. As a result of our efforts, the Finance and Accounting Department is leading the way in our diversity and inclusion initiatives, with more than half of our 135 members already highly skilled at the time of employment.

At the Finance and Accounting Department, we aim to implement measures like these in support of JERA's efforts to enhance its corporate value and, in doing so, become a team of professionals that is highly valued by internal and external stakeholders alike.



# **Fundamental Approach**

As a global enterprise committed to solving energy problems in Japan and around the world, we consider measures to combat climate change to be a priority issue and have identified the relevant material issues.

In September 2021, we endorsed the TCFD\*1 recommendations and joined the TCFD Consortium.\*2 To properly evaluate climate change-related risks and opportunities and sustainably enhance our corporate value, we have identified four elements—governance, risk management, strategy, and metrics and targets—in line with the TCFD Recommendations that summarize our climate change-related systems, our business in general, and the initiatives typified by the Three Approaches of JERA Zero CO2 Emissions 2050.

We will continue to disclose information in line with the TCFD recommendations and further enhance communication with investors and other stakeholders.

\*1 The Task Force on Climate-related Financial Disclosures (TCFD) is the task force established by the Financial Stability Board (FSB) at the request of the finance ministers and central bank governors of G20 countries to stabilize the financial system in the face of factors attributable to climate change. The task force has published a framework and recommendations to guide companies' disclosures pertaining to the risks and opportunities posed by climate change.







# **Governance and Risk Management**

#### Governance

Decisions about important policies, new and updated targets, and other matters pertaining to measures to combat climate change are made by the Board of Directors or the Leadership Panel based on our corporate governance system. We have also established a Sustainability Promotion Committee for the purpose of enhancing environmental, social, and corporate governance (ESG) management. This cross-divisional committee is chaired by the president and reports directly to the Board of Directors. Its Environmental Subcommittee reports on the plans and results of measures to combat climate change and other environment-related initiatives for each fiscal year.

Directors hold active discussions with outside experts and specialist organizations to keep pace with the latest information and findings, which they share with the Leadership Panel and other internal groups. We also host ESG seminars for our employees in addition to providing opportunities for them to have discussions with the directors. We are proactively working to further improve our ESG activities by continuing to expand our directors' and employees' understanding of information and trends in climate change and other aspects of ESG management.

Corporate Governance: p.69 Sustainability Management Structure: p.52

# **Risk Management**

We have established a risk management system headed by the president to understand and mitigate risks associated with corporate activities. The system conducts integrated risk management, categorized into operational, market, and credit risks. We identify climate change-related risks in recognition of their potential to impact the different types of risk. Risks to be managed by directors are identified as "significant risks to be managed by management." The Risk Management Committee (chaired by the president) monitors and reviews the management status and plans for responding to these risks and then reports them to the Board of Directors at scheduled intervals or as needed.

Risk Management: p.72



# **Strategy**

### **Defining the Scope of Analysis**

We conduct scenario analysis to identify and analyze risks and opportunities throughout our business value chain. Our analysis covers not only the short term (through 2025), but also the medium term (through 2030) and long term (through 2050).

#### Under 2°C scenario

Bold policies and technological innovations are implemented to achieve sustainable development, and they successfully limit the increase in average global temperature by the end of this century to 1.5°C-2.0°C from pre-industrial levels.

Reference scenario

IEA: Sustainable Development Scenario (SDS)

IPCC Sixth Assessment Report, Working Group 1: SSP 1-1.9, SSP 1-2.6

# **Scenario Configuration**

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.

#### Over 4°C scenario

Although intended nationally determined contributions under the Paris Agreement and other new national policies are implemented, the average global temperature by the end of this century is at least 4°C higher than pre-industrial levels.

Reference scenario

IEA: Stated Policies Scenario (STEPS)

IPCC Sixth Assessment Report, Working Group 1: SSP 3-7.0, SSP 5-8.5

#### Changes in the global energy supply\*1

	2050	Now		
Power generation output	$57\!,\!950\text{TWh}$ (including $48\!,\!436\text{TWh}$ of renewable energy)	$26,\!762\text{TWh}$ (including $7,\!593\text{TWh}$ of renewable energy)		46,
Electrification rate	40%	20%		
Demand for hydrogen and ammonia	<b>21</b> EJ	<b>0</b> E1		
Demand for natural gas	2,029 bcm (including 880 bcm in Asia)	3,401 bcm (including 839 bcm in Asia)		

2050
$46,\!703\text{TWh (including 27,\!883\text{TWh of renewable energy)}}$
26%
<b>2</b> EJ
4,362 bcm (including 1,442 bcm in Asia)

Changes in global clima	and sea level*2	Now	2100
Increase in average temperature	+1.5°C-2.0°C	+1.1°C	At least +4°C
Extreme heat events*3	Frequency: 4.1x Temperature increase: +1.9°C	Frequency: $2.8x$ Temperature increase: $+1.2$ °C	Frequency: 9.4x Temperature increase: +5.1°C
Extreme precipitation events*3	Frequency: 1.5x Rainfall increase: +10.5%	Frequency: 1.3x Rainfall increase: +6.7%	Frequency: 2.7x Rainfall increase: +30.2%
Sea level rise	+0.4-0.7 m	+0.2 m	+0.8-1.2 m

<sup>\*1</sup> Prepared based on SDS and STEPS from IEA World Energy Outlook 2021

<sup>\*2</sup> Prepared based on IPCC Sixth Assessment Report, Working Group 1. All figures compared to presumed pre-industrial levels

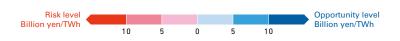
<sup>\*3 &</sup>quot;Extreme" refers to weather events with a probability of occurring once in 10 years.

# **Assessment of Impact on our Business**

We listed and analyzed climate change-related risks and opportunities for our business based on the scenarios on the previous page.

We will work to reduce the risks and seize the opportunities through JERA Zero CO<sub>2</sub> Emissions 2050 as well as other efforts and measures.

	Category		Projected Changes in Business Circumstances	Impact on JERA
		رچ]	Stricter regulation of fossil fuel use Introduction of carbon pricing	Increased operating costs due to carbon pricing
	Policy and legal	ĞĞ-Ü	Stricter energy conservation regulations	Greater need for better energy transport and consumption efficiency
			Changes in energy supply structure through the development and introduction of non-fossil energy technologies  • Development and cost reduction of green fuel technology	Reduced utilization rate of JERA power sources
Under 2° scenario	Technology C		Reduced cost of renewable energy and battery storage technology     Grid diversification	<ul> <li>Expanded opportunities to develop and introduce hydrogen and ammonia fuels</li> <li>Expanded business opportunities provided by renewable energy and battery storage</li> </ul>
	Market and services		Electricity market expansion, diversification of the value of electricity  Increased demand for electricity driven by economic growth and electrification  Increased consumer need for green products and services	<ul> <li>Expanded opportunities to supply power</li> <li>Increased need for natural gas as a bridge fuel</li> <li>Expanded business opportunities provided by green electricity and fuels</li> </ul>
	Market and services /	:s/ 0.20	Growing global awareness of climate change  • Divestment and engagement by investors	<ul> <li>Financial constraints rooted in limited investment in / divestment from the fossil fuel business</li> <li>Reputations compromised due to slow or delayed efforts to combat global warming</li> </ul>
	Reputation		<ul> <li>Efforts to combat global warming accelerated and more directly connected to the public's impressions of companies</li> </ul>	<ul> <li>Expansion of opportunities to leverage transition / green financing</li> <li>Reputations boosted by setting and achieving ambitious goals to combat global warming</li> </ul>
Over 4°C scenario	Acute/Chronic	₩ <b>***</b> *********************************	Increased acute risk  • More frequent/severe natural disasters  Increased chronic risk  • Sea level rise, increased tsunami height  • Changes in climate patterns (e.g., sustained high temperatures)  • Changes in drought risk	<ul> <li>Increased cost of disaster response</li> <li>Increased operating costs associated with facility shutdowns and output constraints</li> </ul>



\* Each risk and opportunity factor is shown here with the method of assessment, the financial factors it impacts, and the financial impact per unit of power generated over the short term (through 2025), medium term (through 2030), and long term (through 2050) expressed as financial impact sensitivity.

Financial impact sensitivity for each risk and opportunity is color-coded in three levels (0–5 billion yen/TWh, 5-10 billion yen/TWh, and over 10 billion yen/TWh) as shown in the legend.

Financial Impact Sensitivity*			JERA's Response to Changes		
Method of Assessment	Impacted Financial Factors	Through 2025	Through 2030	Through 2050	JENAS nesponse to changes
Sensitivity to increases in the cost of coal for thermal power generation, assuming the price of CO <sub>2</sub> in the reference scenario	Costs			•	Actively investing in growth sectors, namely decarbonization business
Sensitivity to decreases in operating costs for each point of improvement of thermal power generation efficiency	Costs				As shown on p.42, in the four-year period from FY2022 to FY2025, we allocated a total of 1,200 billion yen—including 650 billion yen for decarbonization—to investments in growth sectors.  Steadily promoting JERA Zero CO <sub>2</sub> Emissions 2050
Sensitivity to decreases in sales due to reduced volume of electricity sold	Sales		•		We will continue to promote the following measures based on the vision included on pages 1 and 17 to achieve our new vision for 2035 and net zero CO <sub>2</sub> emissions from all JERA businesses (Japan and worldwide) by 2050 (p.20).  • Ceasing/discontinuing coal thermal power generation, streamlining LNG thermal
Sensitivity to the avoided cost of coal for thermal power generation, assuming the price of CO <sub>2</sub> in the reference scenario	Costs		•	•	power generation  Promoting hydrogen-ammonia co-firing, expanding co-firing rates/transitioning to single-fuel firing  Expanding renewable energy, using battery storage to support the adoption of
Sensitivity to increases in sales due to reduced volume of electricity sold	Sales				renewable energy
Sensitivity to increases in operating costs for each point of increase in capital costs	Costs				Actively disseminating information to stakeholders  We will disseminate information about our efforts to achieve zero emissions to electricity users,
Sensitivity to decreases in operating costs for each point of decrease in capital costs	Costs				investors, and other stakeholders in an effort to expand green electricity and diversify our sources of funding.
Sensitivity to increases in operating costs from switching power sources due to facility shutdowns and output constraints	Costs				Improving disaster resilience Our efforts to prepare for both acute and chronic natural disaster risks include developing rules and manuals for responding to emergencies and disasters, conducting disaster drills on a regular basis, and upgrading the JERA version of the business continuity plan (BCP) and business continuity management (BCM). We will also diversify our suppliers and methods of sourcing power and fuel to enhance our disaster resilience.

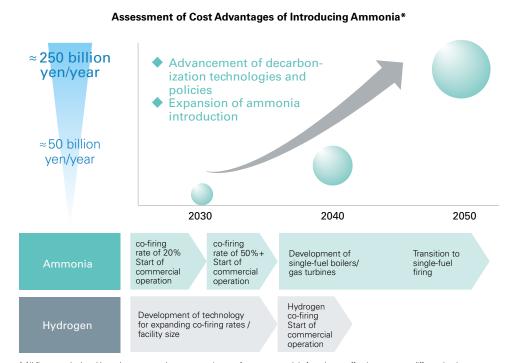
# Assessment of Impact on Our Business: A Deep Dive into the under 2°C Scenario

In light of the steady progress we have made in our business toward achieving JERA Zero CO2 Emissions 2050 since announcing it in October 2020, and due to changes in business circumstances, we formulated a new long-term vision for 2035 and unveiled JERA Environmental Commitment 2035, a set of new environmental targets for achieving the new vision. We updated the JERA Zero CO<sub>2</sub> Emissions 2050 Roadmap for JERA Business in Japan based on the new targets, and our updated plan for introducing hydrogen and ammonia co-firing in Japan is as shown on p.22.

On this deep dive into scenario analysis in line with the TCFD Recommendations, we analyzed the financial impact on JERA of introducing ammonia to our power generation business, which is driven by technological development, assuming the under 2°C scenario and the aforementioned plan for introducing ammonia in Japan.

Our analysis revealed potential cost advantages on the order of 50 billion yen per year by 2040 and 250 billion yen per year by 2050 compared to the scenario in which we continue using coal.

We will continue to proactively develop large-scale fuel ammonia co-firing technology and other decarbonization technologies in addition to devoting energy to ensuring the economic viability of the technologies so that they can help the world move away from carbon as a source of energy.







# **Metrics and Targets**

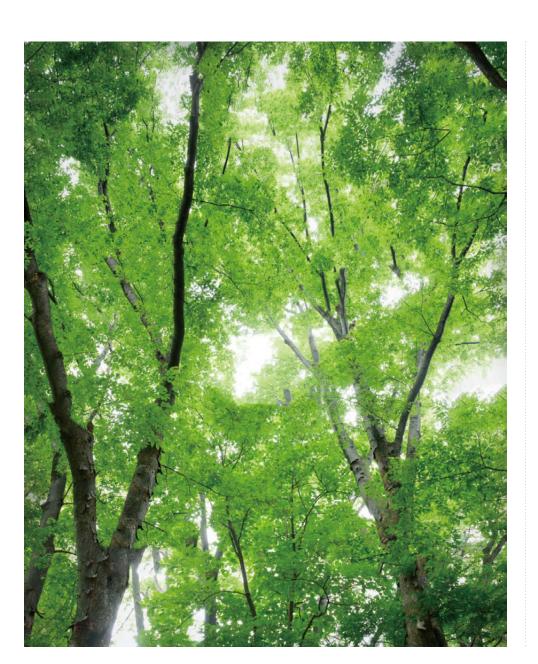
We view JERA Zero CO2 Emissions 2050 as a long-term goal and have developed a roadmap for achieving it as well as interim targets for CO2 emissions in 2030 and 2035. Additionally, we continue to calculate and assess actual results each year to manage our progress.

Targets: JERA Zero CO<sub>2</sub> Emissions 2050 Roadmap for its Business in Japan (p.20)

Actual results: Non-Financial Data Environmental Data (p.81)



# **ESG** Management



### Our Vision for ESG Management at JERA

Our vision for environmental, social, and corporate governance (ESG) and its management is clear and unique. At JERA, we believe that everything we do relates back to ESG. Specifically, we have a unique responsibility as one of the world's largest power producers to pursue decarbonization in the energy value chain through new technologies and ideas (E and S); we provide the stable supply of energy that underpins social life (S); and we aim to break the mold of the Japanese power industry to achieve true global business expansion (S and G).

Unlike Europe and the United States, Japan is a mountainous country surrounded by deep sea, which limits the penetration of renewable energy. It is also characterized by high precipitation and frequent typhoons, which can cause significant fluctuations in renewable



Tatsuya Tsunoda Managing Executive Officer

energy output. To ensure the stable delivery of electricity to customers, we must supplement this output with thermal power generation, which we can operate flexibly. JERA's ESG approach is unique in that to solve environmental issues, we not only focus on the development of renewable energy but were also among the first to take the bold step of shifting to low greenhouse gas thermal power generation and using hydrogen and ammonia as fuels for thermal power generation, which is one of our strengths. Our vision for ESG is to apply our expertise and technologies to the diverse characteristics of each region where we do business, adapting and growing together with regions overseas, especially in Asia, where economic growth is strong, in order to build a sustainable energy supply system for the next generation.

The driving force behind ESG management at JERA is two-fold, combining our workforce's various personalities, abilities, and expertise with an autonomous global management structure comprised of management and energy professionals. And we must refine these forces to further enhance ESG management. In particular, to further develop our unique organizational culture, one of JERA's strengths, we will continue to create pleasant workplaces that foster respect, inspiration, and support among our diverse talent, which spans gender, nationality, and background.

JERA will utilize the opinions of outside stakeholders in the advancement of ESG management, and at the same time, we hope to increase engagement through extensive communication of our commitment and efforts to contribute to sustainable social development.

# **ESG** management

### **Sustainability Promotion Initiatives**

Sustainability at JERA is headed by the Sustainability Promotion Committee, which reports directly to the Board of Directors and is chaired by the president. The committee discusses internal and external issues related to the SDGs and company-wide promotion of sustainability. In FY2022, the committee has engaged in many discussions, especially on materiality and the value-creation process.

In addition, four executive subcommittees (Environment Subcommittee, Society and Human Rights Subcommittee, Governance Subcommittee, and PR and IR Subcommittee) are working across divisions on sustainable business activities from an ESG perspective and are looking into ways of enhancing communication with stakeholders, particularly the Integrated Report, and to promote internal awareness.

#### **Sustainability Management Structure**

(as of August 31, 2022)



#### Recommendations for the Board of Directors

The ESG Advisory Group was established in September 2021 as a voluntary panel to provide advice and recommendations to the Board of Directors and, as necessary, to executives from the standpoint of ESG. Members include Director and Executive Vice President Kazuo Sakairi as coordinator, Director Joseph Naylor, GAE Paul Hanrahan\*1, GAE Nobuo Tanaka, and Senior Advisor Hendrik Gordenker

This group is composed mainly of outside experts\*2 familiar with the energy industry and corporate management and addresses ESG-related issues. Over more than ten meetings, the group has had animated discussions on trends in the ESG field that impact JERA, the views of capital market participants on ESG, and how business plans and disclosures should be made from an ESG perspective. As a result, the group has provided advice and recommendations to the Board of

Directors on incorporating an ESG perspective into business plans and disclosing non-financial information regarding JERA's medium- to long-term strategy and CO<sub>2</sub> emissions targets.

The group will continue to share with management information on ESG trends, issue awareness and perspectives among capital market participants, and other matters, incorporate these into governance, and strive to enhance JERA's corporate value through improved information disclosure.

#### Main Issues

- ESG strategies that contribute to the improvement of corporate value
- Strategies for effective disclosure of information to stakeholders
- Provision of information and recommendations related to global ESG trends and developments
- \*1. Global Advisory Expert: An advisor invited to the group as an outside expert with deep knowledge of global management.
- \*2. Paul Hanrahan (former CEO of AES), Nobuo Tanaka (former Director General of IEA), Hendrik Gordenker (former JERA Chair)

#### United in Our Commitment to ESG

We actively promote discussion among employees to engage our employees on ESG-related themes.

We are experimenting with bringing employees together online from various locations and age groups in employee-led small-group sessions to share information on ESG-related initiatives and raise awareness of the issues that each workplace faces. We hope this will lead to the creation of new ideas from the bottom up. These small groups also serve as forums for sharing and discussing the ESG strategies that JERA is pursuing as a corporate group.

In FY2022, we will also conduct in-person meetings, using the company-wide theme of ESG as an opportunity to deepen interactions among employees and achieve common objectives.



# **Environment**



#### Issue Awareness

As the world's population grows and the global economy develops, we see increasingly severe environmental issues on a global scale, including overuse of resources, waste and pollution, and loss of biodiversity. Global warming, in particular, is progressing due to increased greenhouse gas emissions from human activities, and disasters caused by extreme weather events are becoming more frequent and intense worldwide, threatening people's livelihoods and economic activities.

Amid this situation and in response to the agreements by the international community on SDGs and the Paris Agreement, the development of targets and frameworks for climate change countermeasures, conservation of biodiversity, and the creation of a recycling-oriented society is accelerating. As such, there are increasing demands and expectations for governments and corporations to take action.

JERA is committed to taking the initiative in working to solve environmental issues while coordinating with our stakeholders by utilizing our technologies and know-how to realize a sustainable society conducive to both environmental conservation and economic growth.

# **Fundamental Approach**

As a leader in the domestic thermal power generation industry, JERA respects energy and environmental policies such as the Basic Energy Plan and actively promotes the development of renewable energy.

Furthermore, we seek to become a global energy company and are fully aware of the need to protect the environment on a global scale. We strictly observe the environmental laws and ordinances of each country and territory and work to reduce our environmental footprint, which includes reducing CO2 emissions to realize a sustainable environment, society, and economy.

### **Environmental Management System**

To minimize resource consumption and the generation of environmentally hazardous substances, we are actively working to improve power generation efficiency, reduce our CO<sub>2</sub> emissions, remove air pollutants, and recycle waste. In addition, we have established a Sustainability Promotion

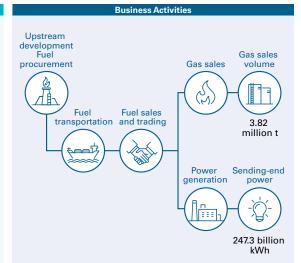
Committee for the purpose of enhancing ESG management. This cross-divisional committee is chaired by the President and reports directly to the Board of Directors. Meanwhile, the Environmental Subcommittee reports on the plans and results of environment-related initiatives for each fiscal year. The Environmental Subcommittee will continue to play a central role in better environmental management and contributing to the development of a sustainable society. (Diagram of Sustainability Management Structure: p.52)

#### **Environmental Education**

We provide training for employees involved in environmental operations at our power plants and other facilities so that they can acquire the necessary knowledge and skills concerning the environment. Training levels correspond to job class and proficiency, and we are working to develop environmental education programs for employees.

#### Material Balance (FY2021\*1)

	nput
Fuel consumption	n
Coal	20.04 million t
Petroleum	0.04 million kl
LNG*2	27.43 million t
Biomass	0.38 million t
Total energy consumption	Purchased electricity
50.80 million kl (crude oil equivalent)	84.75 million kWh
Water usage	
Industrial water intake	18,165 thousand m <sup>3</sup>
Tap water intake	864 thousand m <sup>3</sup>
Groundwater usage	118 thousand m <sup>3</sup>
Total	19,147 thousand m <sup>3</sup>



	0	utput		
GHG emissi	ons	(CO <sub>2</sub> equivalent)		
Scope 1	121	121,098 thousand t-CO <sub>2</sub>		
Scope 2	37 thousand t-CO <sub>2</sub>			
Scope 3	32,508 thousand t-CO2			
Total	153	,643 thousand t-CO2		
SOx emission 6.32 thousand		Gross wastewater volume 7,188 thousand m <sup>3</sup>		
NOx emissi	ons	COD emissions		
17.68 thousa	nd t	20 t		
Disposal by reclamation				
19 thousar	nd t			

<sup>\*1.</sup> Figures for JERA in Japan and joint ventures with Hitachinaka Generation Co., Inc. and JERA Power TAKETOYO LLC only \*2. Includes natural gas and LPG

# **Environment**

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

In October 2020, we announced JERA Zero CO<sub>2</sub> Emissions 2050 as our commitment to curbing CO<sub>2</sub> emissions for the future.

With a mission of providing cutting-edge solutions to the world's energy problems, we will take on the challenge of achieving net zero CO<sub>2</sub> emissions from our operations in Japan and abroad by the year 2050 in order to realize a sustainable society.

We also continue to work on ongoing renewable energy initiatives, which include promoting our business both in Japan and overseas and participating in related organizations. With offshore wind power, we have participated in projects in the U.K. and Taiwan and are now considering development projects in Hokkaido and the Tohoku region. In our solar power generation operations, in addition to participating in projects throughout Asia, we have signed a business alliance agreement with West Holdings Corporation in Japan and plan to develop facilities with a total capacity of more than 1 GW by the end of FY2025.

Our efforts to reduce CO<sub>2</sub> emissions from thermal power generation include the implementation of large-scale woody biomass co-firing (co-firing rate of 17%) at Taketoyo Thermal Power Station Unit 5, which started commercial operation in August 2022, and work on a proof-of-concept for hydrogen and ammonia co-firing.

Highest performance in Japan FY2021 Total thermal power generation efficiency (low heating value) 48.2

[Taketovo Thermal Power Station Unit 5] Highly efficient coal-fired power generation using an ultra-supercritical (USC) power generation system

Percentage of woody biomass co-firing



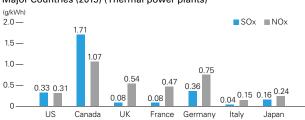
Reduce CO<sub>2</sub> emissions using woody biomass fuel co-firing

JERA will promote the adoption of greener fuels and pursue zero-emission thermal power during power generation. We aim to achieve zero emissions by supplementing the introduction of renewable energy, which is susceptible to natural conditions. with zero-emission thermal power, which can generate electricity in a stable manner without CO<sub>2</sub> emissions.

### **Preventing Air Pollution**

Air pollutants emitted from our thermal power plants include sulfur oxides (SOx), nitrogen oxides (NOx), soot, and dust, primarily from boiler exhaust. In order to comply with emission standards set by laws and ordinances as well as environmental conservation agreements with municipalities, we are improving combustion methods and working to reduce emissions by installing exhaust gas desulfurization equipment, exhaust gas denitration equipment, electrostatic precipitators, and other equipment. In FY2021, our SOx and NOx emissions per unit of production were 0.03 g/kWh and 0.07 g/kWh, respectively, which are extremely low compared to major Western countries.

SOx and NOx Emissions Per Unit of Power Generation Output in Major Countries (2019) (Thermal power plants)



Source: Based on OECD Stat Extracts (for emissions) and IEA World Energy Balances 2021 (for power generation output)

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

Wastewater generated by our thermal power plants is purified by wastewater treatment facilities in order to comply with the

effluent standards of laws and ordinances as well as environmental conservation agreements we have with municipalities. We discharge this wastewater appropriately while monitoring it using continuous water quality measurement equipment. In addition, to keep the temperature of the seawater used in the condenser from rising, we take it in slowly from the deeper layers where the temperature is lower. When discharging it, we do so slowly to the surface by reducing the discharge velocity, giving full consideration to the environmental impact on the surrounding sea.

#### **Featured**

Endorsement of the GX League Basic Concept Green transformation (GX) refers to the transformation of the entire economic and social system to achieve emission reductions and increase industrial competitiveness by viewing initiatives to achieve greenhouse gas emission reduction targets as an opportunity for economic growth.

On February 1, 2022, the Ministry of Economy, Trade and Industry of Japan (METI) announced the establishment of the GX League as a forum for corporate groups actively engaged in GX, together with government, academia, and financial institutions, to discuss the transformation of the entire economic and social system and work on the creation of new markets, as well as the GX League Basic Concept, which describes the world view and initiatives it will pursue.

Based on our mission to provide cutting-edge solutions to the world's energy issues, we have announced the JERA Zero CO<sub>2</sub> Emissions 2050 initiative and are pursuing net zero CO<sub>2</sub> emissions from our operations both in Japan and abroad by 2050. We have endorsed the GX League Basic Concept as we believe its intent is consistent with this initiative.

JERA will continue to take the lead in the decarbonization of the energy industry by proactively developing decarbonization technologies and by working with related institutions, organizations, and stakeholders to resolve various issues.

# **Environment**

### Initiatives Related to Resource Recycling

Coal ash effective

utilization rate

We are actively engaged in recycling to make effective use of limited resources. The main waste we generate is coal ash from our coal-fired thermal power stations. We are promoting the effective use of coal ash as a raw material for cement and land development because of its excellent properties, which

The Plastic Resource Circulation Act went into effect in April 2022. We are also actively promoting the reduction and recycling of industrial waste associated with products that use plastic generated by our business activities. The amount of waste plastic discharged and the effective utilization rate in FY2021 were 362 tons and 98.56%, respectively.

include fine grain, light weight, and increased strength. Our

effective utilization rate of coal ash in FY2021 was 99.99%.

# **State of Waste Treatment Facility Maintenance**

The Waste Management and Public Cleansing Act requires that information on the status of the maintenance and management of waste treatment facilities be made public. We properly maintain and manage the appropriate waste treatment facilities and provide online reports regarding facility maintenance (type and amount of waste disposed of, results of water quality measurements performed on discharged water, facility inspection results, etc.). In FY2021, we began reporting the status of Kinuura Landfill No. 1.



### Control of Chemical Substances

We observe the requirements of the Pollutant Release and Transfer Register Act (PRTR) for chemical substances used at thermal power plants and are working on 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 environmental conservation agreements with municipalities. In FY2021, there were no cases involving fines or sanctions for violations of environmental laws and regulations.

# **Environmental Impact Assessments and Consideration of Environments Surrounding Power Plants**

When constructing or replacing power plants, we conduct assessments of the environmental impact on the surrounding environment both during construction and after the plant is operational in accordance with the Environmental Impact Assessment Act. We then explain the results to the municipality and community members and engage in dialogue with them.

#### **Primary Measures**

Measure	Description				
Measures for Noise and Vibration Control	Our noise and vibration control measures include choosing the proper placement of buildings and equipment, adopting equipment for reducing noise and vibration, and installing silencers and sound barriers.				
Measures for Industrial Waste Control	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 also: "Coexisting with Local Communities" on p.65				

Based on the results of these environmental impact assessments, we strive to conserve the surrounding environment by implementing appropriate noise and vibration control measures, industrial waste control measures, and landscape preservation measures, taking into consideration the impact on the surrounding environment.

### **Preserving Biodiversity**

When endangered plants and animals are identified in the environmental impact assessment, we take steps to preserve biodiversity, including efforts to maintain and restore habitats and ecosystems.

The environmental impact assessment conducted when replacing the Yokosuka Thermal Power Plant (Units 1 and 2) showed that the area was inhabited by falcons, which are designated as a rare endangered species in Japan. Accordingly, we took measures to avoid affecting their habitat, which included using low-noise, low-vibration machinery during construction. We also installed nesting boxes for falcons in the new stack to create an environment conducive to nesting. We will continue our efforts to preserve the habitat by maintaining green areas in consideration of the falcons' hunting environment.



Green space development at the Yokosuka Thermal Power Station



# **Talent Development**

# Assembling the Ideal JERA Team

# **Four Defining Characteristics**

#### Diversity



Employees strive for personal and organizational growth by respecting diversity at all levels of the organization, regardless of differences in gender, nationality, ethnicity, experience, or expertise.

Employees aim for personal growth and seek to become experts who consistently and enthusiastically incorporate new skills and know-how.

**Employees** 

& Families

# Entrepreneurialism 1

Employees are keen to recognize change and innovate.

#### **Fairness**

Employees hold themselves accountable and engage in all initiatives from a position of high ethical standards and fairness.

### **Priority Initiatives for Our Team**

#### **Corporate Culture**

- Management training
- Raising awareness
- Diversity and inclusion

#### **Career Development** Launch of independent career development

- Clear career paths and consultation opportunities
- Enhanced elective, position-based, and selective
- Introduction of internal recruitment system

#### **Human Resources**

- · Infrastructure built to attract internal and external talent
- Merit-based approach to remuneration/ evaluation/promotion

#### Working styles/benefits

- Remote work expansion
- · Satellite offices (Yokohama, Nagoya)
- Full benefits, including vacation and allowances

#### **Talent Development Policy**

The JERA Group considers every employee an essential asset and conducts talent development as described below.

#### **Talent Development Objectives**

- 1 To allow employees to grow and live their lives to the fullest
- 2 To enhance the JERA Group's corporate value and to help us achieve our mission and vision through employee growth

#### **Fundamental Approach**

- ■The JERA Group respects the diversity of its workforce and supports employees in all areas of the organization to realize their professional aims.
- Helping employees improve their skills and develop a mindset for sustained success and dominance inside and outside Japan as well as contributing to social progress
- The JERA Group provides opportunities to take on challenges that help the company stay ahead of the times.
- Helping employees learn how to adapt quickly in times of uncertainty
- Striving to provide a work environment that allows employees to grow further and demonstrate
- The JERA Group honors employees' career goals and provides maximum support to help
- Providing skills training and job rotation opportunities so employees can achieve their career goals

We actively support the growth of all JERA Group employees, including those working overseas.

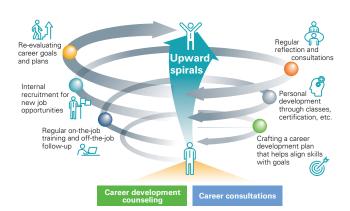
# **Talent Development Plan**

Based on the Talent Development Policy formulated in March 2020, we have established a framework to strategically support employee growth, including independent career development and professionalism training.

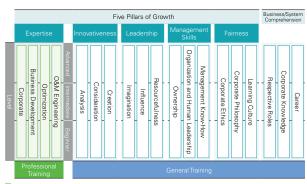
The JERA work environment is a supportive one that enables employees to reach self-fulfillment and facilitates initiatives like a career development system that encourages employees to build their own career paths, training programs that provide multifaceted support for career-focused skill enhancement, and an open recruitment system that offers new challenges for those looking to diversify their work.

We are committed to continually evolving these structures to provide opportunities that allow all our employees to demonstrate their abilities fully and grow together with the company.

#### **Independent Career Development Overview**



#### **Training System**



- Professional training provides the necessary skills to succeed across all areas of the company, along with cutting-edge solutions and sophisticated, specialized knowledge and skills.
- General training offers a number of development opportunities, including position-based and elective training programs planned by the Human Resources Development General Management Department.

# **Diversity & Inclusion**

# **Major Commitments**

Diversity and inclusion (D&I) is a central strategy in achieving our mission. JERA aims to be an organization rich in diversity across gender, nationality, ethnicity, ability and disability, sexual orientation and identity, experience, expertise, and beyond. We will achieve a fair and just workplace where inclusion is realized by empowering diverse talent to share mutual respect, reach their full potential, contribute to the organization, and achieve personal growth.

Our vision for diversity and inclusion is summarized in these two core beliefs:

- JERA must make every effort to help all employees and associates feel happy and motivated to the benefit of themselves, their partners, families, and communities.
- Our vision and mission can only be achieved if our employees and associates are happy and motivated.

We are united in creating a new JERA capable of delivering unique solutions to the world in which we live.

Toshihiro Sano, Chair Satoshi Onoda, President

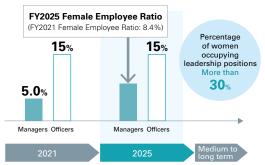
In January 2022, officers in charge of each division disseminated the "D&I Declaration of Conduct" to all employees in an effort to emphasize accountability, one of many D&I initiatives we are working on toward realizing the above commitments.

# **D&I Promotion Strategies**

#### Increasing the Proportion of Women in Leadership Positions

We are focusing on gender diversity as a significant opportunity to make an impact, given its inherent potential to offer new viewpoints and ensure an equal approach to ideas. We intend to increase the proportion of women in leadership positions by setting quotas and proactively providing opportunities for female employees.





<sup>\*</sup>Officers defined by the Japan Companies Act

# **Overview of D&I Promotion Strategies**

At JERA, all employees share a path toward new value creation through respect for diversity and open dialogue. We are developing various measures to foster an inclusive and just organizational culture in which everyone receives opportunities and anticipates ways in which they can grow and contribute to the company.

	Measures	
Inclusive Organization Building	D&I Month	<ul> <li>Held companywide workshops and events in November 2021</li> <li>Offered four workshops on the themes of what D&amp;I means for JERA, the balance between career and childcare, and paternity leave, with a total of ≈ 950 people in attendance</li> </ul>
	D&I Award	<ul> <li>Called on each organization to submit examples of D&amp;I initiatives, after which employees voted to select a grand prize winner</li> </ul>
	Men's Leadership D&I Acceleration Program	$\bullet$ Conducted a program encouraging men to drive change under the themes of equity and inclusive leadership. The program was conducted three times for $\approx\!80$ department heads and power plant managers.
Female Empowerment Initiatives	Career Development Support to Increase the Proportion of Women in Leadership Positions	<ul> <li>Assigned mentors to help support women in management positions through efforts in areas such as career development awareness, network-building, and opportunity recognition</li> <li>Offered career development training, including leadership training, exercises in work-life balance for mothers, inter-industry exchange, and training to foster career development awareness</li> </ul>
	External Network-Building & Collaboration	Participated in G20 EMPOWER (a private sector alliance that strives to increase the number of women who play a vital role in corporate decision-making) and was featured in the Best Practices Playbook 2021 and 2022, its compilation of best practices and policies from around the world     Endorsed the Japan Business Federation's Challenge to 30% in 2030     President participated in the Male Leaders Coalition for Empowerment of Women
Promotion of Employment Opportunities for Persons with Disabilities		Expanded operations of special subsidiary JERA Miraiful and employment opportunities for people with disabilities     Reopened the newly renovated Yokohama Strawberry Park
Promotion of LGBTQ+ understanding	JERA Pride Month	Designated June 2022 as Pride Month and offered all employees an e-learning program to deepen their understanding of LGBTQ+ issues. ≈ 3,800 employees took part in the program.     Sponsored Tokyo Rainbow Pride 2022 and supported employee participation in the event
Employee Resource Groups	Employee Resource Groups	Supported employee resource groups (ERGs) to improve issues related to D&I     Celebrated two new groups beginning activities in FY2022, one focusing on work-life balance for parents and one serving as an LGBTQ+ ally

#### **Feature**

# JERA Miraiful Begins Operations

JERA Miraiful is a wholly-owned subsidiary established in April 2021 to create employment opportunities

that promote independence and social participation among people with disabilities.

We began full-fledged operations alongside new graduate hires in April 2022. We now have 12 staff members with disabilities working alongside other staff as one team where they recognize each other's individuality and value compassion.



East Japan Center (Yokohama): work, and more at Yokohama Strawberry Park



East Japan Center (Nagoya): Strawberry cultivation, custodial Flower cultivation, garden care at power plants, and more

# **Talent Development**

# "DEI" is the Source of Solutions and Innovations



The war for talent is becoming increasingly fierce, and having good people is the key to achieving success and differentiation. Attracting, growing, and retaining these people is one of the most important roles of any company's leadership, and creating a framework for doing so requires alignment with the company's strategic goals. JERA's stated long-term mission is to provide innovative energy solutions to drive decarbonization and sustainable development in Asia and the world. That is the "why" of JERA's existence, and so we first need to amplify this message to all potential and existing staff to create a sense of an overarching purpose with which people can identify. People increasingly seek more than just financial rewards from their workplace; they need to feel that they are contributing to a worthwhile cause that makes a positive difference to the world around them while enriching their own career experience.

We live in times of global uncertainty and breathtaking change, all of which require a breakthrough approach to business rather than one of "business as usual." JERA faces numerous challenges and problems, so it is imperative for our people collectively to be open-minded, embody and embrace diversity, and have a global outlook. We often hear about the importance of DEI -Diversity, Equity, and Inclusion - which is particularly relevant right now. Countless studies have proven that the most creative solutions to problems and breakthrough innovation originate from diverse people working together, harnessing the power of their varied backgrounds, experiences, and viewpoints. Managing a diverse organization is never easy; hiring and working with people in your own image is so much easier. But without making the effort to build a diverse organization

through policies and heightened attention to the task, we can never reap the rich rewards that thinking outside the box can bring.

To nurture productive DEI, the company must provide a transparent, collaborative culture where people feel safe to express their opinions and make suggestions, regardless of rank or hierarchy, are treated with respect and are given the information and support they need to succeed. Equity means fairness, offering employees equal access to programs, promotions, and opportunities so they can develop their full potential. Diversity and its benefits cannot be reaped without inclusion, which means people feel they can contribute meaningfully as part of a team with shared values and goals.

Of course, reward and recognition are important. Individuals need to feel that their contributions are appreciated, that exceptional work will be appraised appropriately, and that promotions are based on merit, not tenure or seniority. Management should deploy a transparent framework for job grading, structure, and remuneration, which can be compatible in Japan and globally to encourage job rotations so that people have the chance to not only expand their skills, experience, and horizons but also gain access to work opportunities outside their home countries.

There is also a great deal of focus today on ESG and SDGs. This means that a company that is fulfilling its societal and moral obligations, whether in championing human rights or working to protect the environment, will naturally be more attractive to potential employees as well as desirable investors, partners, and customers. We must do everything in our power to make sure we are leaving a healthy, safe, and just world for future generations.

As I said earlier, we live in unpredictable times. But by the same token, it is a time when change is characterized by multiple discontinuities—things being done in ways that would have been deemed unthinkable a short while ago. Discontinuity calls for us to reimagine what is possible; it is a powerful catalyst for innovation and generates new opportunities. By building an organization with people who can recognize and embrace discontinuities, JERA is committed to constructing a work environment for people to move forward and creating bold, breakthrough solutions that can change the world.

# **Diversity & Inclusion**

# Creating an Organization that Honors Individual Strengths

JERA has a unique corporate culture comprising a mix of mid-career transfers from shareholders and new graduate hires from various backgrounds. Here, Minako Fujile, Managing Executive Officer of Diversity & Inclusion, sits down with two young employees to explore how JERA can become a better, stronger company.



Nakamura: Currently raising a newborn baby

Fujiie: Mother of two (now adult) children

Boldmaa: Currently raising a 5-year-old

Fujiie Most employees at JERA have transferred from shareholders, where the majority of employees are Japanese men. As a result, non-Japanese and female employees are in the minority. I would like to explore what we need to do to ensure that all employees feel respected and empowered, regardless of their majority or minority status.

# **JERA Today: Internal and External Perspectives**

Fujiie Boldmaa, why did you first become interested in working at JERA?

Boldmaa I was attracted by the scale of the business, but more than that, I was drawn to how JERA employees strive to make a positive change in the company and society through energy. I chose to come to JERA because I felt that it provided an environment where I could use my skills and experience to contribute to the company and grow as a person.

Fujiie Has JERA met your expectations? Boldmaa For the most part, it's just as I imagined. But I would say that some aspects of the organization do not maximize each employee's full potential. Perhaps employees are still a bit reserved because of just how

diverse JERA has become in such a short time since its inception. Many people here have backgrounds and expertise that JERA should be proud of, and I hope the culture can shift to one where people feel free to express their opinions, regardless of age or position.

Fujiie Nakamura, what did you expect when transferring to JERA from a shareholder company? Did you have any concerns?

Nakamura Well, JERA is a meritocracy, and I was a little worried about whether my skills would measure up. But at the same time, I was also excited about the opportunity to take on a new job in a company with such a fair and challenging outlook.

It's been one year since I changed jobs here, and every day I am reminded of how the company



Minako Fujiie Managing Executive Officer (Diversity and Inclusion)

Minako began her career at TEPCO in April 1988 and served as an auditor at JERA until March 2022.

# **Diversity & Inclusion**

respects our individual opinions and encourages us to challenge ourselves. I'm still early in my career, but I'm often able to bring my own opinions to my work, which has helped me build confidence. Fujile You're right. If we can foster a culture that respects individuality and encourages employees to see challenges as opportunities, we can help each other continue to develop our skills. If we respect and leverage our diversity—in other words, when we promote inclusion each of us will grow, and organizational creativity will increase, leading to higher corporate value.

### **Diverse Talent, Diverse Work Styles**

Fujiie JERA has introduced a new system that allows for more flexible ways of working, and we are focused on fostering a culture that recognizes diverse work styles. I want to ask what it's like to work while raising children. Have you taken childcare leave? And what kind of support have you received from those around you?

Boldmaa With my team, we each have our own strengths and are relatively independent, so I rarely feel stressed. We also make sure to communicate and work closely with our supervisors and collaborators in case of sudden absences so that a project doesn't get delayed. When we look out for each other, the entire team feels more productive.

Nakamura In our generation, both spouses tend to work and share household responsibilities. I personally took paternity leave when my first child was born. Even though paternity leave isn't as common in Japan, I wasn't particularly worried because of the positive messaging we hear from the president and the encouragement I received from my supervisors and colleagues. Working remotely now allows me and my wife to split the responsibilities of childcare.

Fujiie Our corporate culture needs to recognize and foster diverse work styles. And when we combine that with robust systems and allow individuals like yourselves to figure out what works best for them, we believe that everyone wins. And as more fathers take paternity leave, the assumption that childcare and housework are a woman's job will be replaced by an awareness that both parents are responsible for childcare and housework. That shift will also promote female empowerment, an important initiative here at JERA.

# To Become a Stronger Company

Fujiie Finally, I'd like to hear what you think JERA needs to do to become a better, stronger company.

Boldmaa I feel like so many people at JERA have unique strengths and interesting personalities. In my department, we share daily goings-on as an icebreaker at the start of meetings. If the whole company shared that open atmosphere, it would help us better understand each other and further promote diversity and inclusion. It is also important to have enough private time for things



Boldmaa Jargalsaikhan Overseas Offshore Wind Power Business Group Overseas Offshore Wind Power Business Unit Assistant Manager

Boldmaa joined JERA in June 2019 as she was busy raising a 2-year-old.



Keishi Nakamura **O&M** Engineering Division Operation Group Operation Management Unit

Keishi started his career at TEPCO in April 2010 before transferring to JERA in April 2021. In 2021, he took one month of paternity leave to look after his newborn baby and is currently balancing work with childcare.

like family, hobbies, and study to feel refreshed when you come back to work. I believe that each individual should be able to demonstrate their individuality and personality out in the world and in the office. I think JERA will grow naturally as the company embraces a more open and fair work environment. I hope management feels the same way, and I look forward to seeing that kind of atmosphere grow throughout the company.

Nakamura I agree with Boldmaa. Having taken paternity leave myself, I'm now having people from other parts of the company reach out to me for the first time to ask for help with the process. This kind of positive communication has increased, which has led to an acceptance of paternity leave and new ways of working. If employees can learn from each other, inspire each other, and create new and diverse experiences both within the company and at home, I think JERA will become a better, stronger organization.

Fujiie The COVID-19 pandemic has certainly made communication more difficult, but that is why it is important to share how we want to live and listen to each individual voice in order to make those changes happen. It energizes the entire organization when we leverage our diverse perspectives, experiences, and abilities and allows each individual to feel the ways they can make a difference within the organization. JERA's vision for promoting diversity and inclusion is summarized into two core beliefs. First is the belief that the company must make every effort to help all employees and associates feel happy and motivated at JERA, to the benefit of themselves, their partners, families, and communities. And second is the belief that our vision and mission can only be achieved by happy, motivated employees and associates. Today, you've reminded me of the importance of promoting diversity and inclusion throughout the organization to realize our vision and guide JERA to become a better, stronger company. We will continue working to establish a joyful, fulfilling environment for all employees. Thank you both for sharing your inspirational experiences.

# **Communication with Employees**

### **Fundamental Approach and Issue Awareness**

JERA was formed by two electric power companies with different corporate cultures. To maximize the synergy of this merger and achieve growth, it is of utmost importance for us to unite and integrate as "One Team," and we are developing various opportunities for intra-company dialogue and interchange and continue to work toward creating a more interdisciplinary and integrated organization.

Lack of internal communication is an important issue that companies must work to resolve, as it can lead to decreased employee motivation, increased stress, and lower productivity.

The pandemic has meant that much of our work has moved online. To stay connected with our employees, JERA has introduced a new hybrid system that combines office and remote work. As the ways we work continue to evolve, they help inform a new work environment where employees will feel motivated to do their best as "One Team."

To that end, we have made internal communication a top priority, and we plan to develop an array of internal exchange programs as part of our commitment to becoming a more interdisciplinary and integrated organization.

#### **Online Cafe**

With the shift to remote work, we now hold online events to initiate employee communication, including coffee breaks with President Onoda and our One JERA Party company-wide social mixers.

These opportunities have proven invaluable for discourse on diverse subjects, including communication problems and solutions. They have also become a catalyst from which ideas and innovations emerge.

Measures	Description
Coffee Break with the President	This initiative helps flatten the organization and provides an opportunity for open dialogue between the president and employees.

# Post Anything: Management-Employee Communication

We have set up an internal message board where employees can "Post Anything," freely and anonymously voicing their questions and concerns, suggestions for improvement, anxieties and worries, and positive feedback. The feedback is delivered to management and then shared with the entire company, including proposed responses to any concerns from the departments in charge. In FY2021, we received 75 submissions that resulted not just in responses but also tangible improvements to the way we do business.



This open office design encourages communication between management and employees

# **Employee Satisfaction Survey**

We conduct an annual employee satisfaction survey to gain a quantitative understanding of employee opinions about their work and job fulfillment.

The survey touches on three categories: work and its value, working conditions and environment, and company loyalty. In FY2021, the survey had a response rate of 94.4%.

The JERA overall employee satisfaction rate was 69%, 11 points higher than the average among companies surveyed by the commissioned research firm and affirming a positive position for the year. Issues highlighted by the survey are used by top management to examine improvement measures and as core data for formulating future company policies and management strategies toward more attractive workplaces and enhanced corporate value.

#### **Featured**

### One JERA Party 2021: Connecting 337 Employees from Around the Country

At the end of FY2021, we launched One JERA Party 2021, an online get-together held on three separate occasions in February 2022. Employees from our headquarters, branch offices, and power plants in Chubu, Kanto, and Tohoku participated remotely from their computers. President Onoda gave a toast to kick off the events, which were held to foster the sense of unity threatened by the COVID pandemic. One JERA Party 2021 included activities that all employees could enjoy, including guessing games and the chance to move around the virtual space and get to know each other. A total of 337 employees took advantage of this opportunity to develop stronger connections with their colleagues.



# **JERA Work Design**

# **Promoting JERA Work Design**

We are designing new ways of working in pursuit of productivity and efficiency, meeting employee expectations, and securing excellent human resources. We aim to put together a plan for reform in both tangible and intangible ways.

In order to allow our diverse team of talent to reach their full potential, we will design different ways to work, balancing face-to-face and remote work in a hybrid manner. We call this "JERA Work Design," and it entails the following:

- System: Designing mechanisms to enable our diverse talent to work flexibly
- Workplace: Designing workplaces that support diverse ways of working and help generate innovation
- Culture: Designing an open and transparent company culture that recognizes diverse ways of working

Through these initiatives, we aim to ensure the happiness of our employees and their families and promote growth that enhances JERA's corporate value, all while fulfilling our essential social duties as a utility provider.

### **Promoting Work-Life Balance**

As part of our efforts to promote work-life balance, we implemented a teleworking system in February 2020 to enable more flexible ways of working. Employees can choose to work remotely for any number of reasons. We have also established systems to support child-rearing, including "life support leave," which encourages men as well as women to participate in raising children. We are initiating reforms so that all of our diverse talent can play an active role.

# Measures to Achieve the Three Themes of JERA Work Design

### Designing mechanisms to enable our diverse talent to work flexibly

#### Versatile hybrid work options

• Ease the requirements for remote work to realize more flexible ways of working

#### Remote work process standardization

· Realize 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

• Improve the online training system to support employees' independent career development

# **Designing workplaces that support** diverse ways of working and help generate innovation

#### Establishment of satellite offices

· Reduce the burden of long-distance commuting and temporary assignments away from family through use of satellite offices (currently in place in Nagoya and Yokohama)

#### Creation of workplaces premised on remote work

- Promote the use of unassigned desks in offices and other efficient office space utilization
- Facilitate interaction and create innovation through layout changes and other efforts

# Designing an open corporate culture that allows for diverse ways of working

#### D&I advocacy

- Plan and implement online events in which employees can easily participate
- Foster an inclusive and open corporate culture through group work and the exchange of opinions

#### Management support for the promotion of diverse ways of working

- Provide manager training on remote work business management
- · Utilize digital communication tools

# Pursuing the Happiness of Employees and **Their Families**

Because JERA has many offices in Japan and abroad, many employees are on assignment away from their families. For that reason, starting in December 2021, we made full remote work available to employees who do not wish to work away from their families. In addition, employees previously had to take a leave of absence when accompanying their spouses on overseas assignments, but it is now possible to continue working via full remote work if approved.\*

We pursue the happiness of our employees and their families by taking into consideration individual circumstances and allowing employees to choose the style of work that best suits them.

\* Certain conditions must be met for approval.

#### Featured-

#### **Promoting Paternity Leave**

We have fostered a culture that recognizes diverse ways of working, and an increasing number of male employees are utilizing the childcare leave system.

- We shared a handbook on how to be a family-friendly boss with all employees, which includes a message from the President, details on the paternity leave system, and specific examples of supervisor actions.
- We use the company newsletter to publish interviews with employees who have taken childcare leave and their

#### Paternity Leave Utilization

supervisors.

FY2021 12 men took an average of 5 months leave

FY2022 (as of August) 22 men took an average of 1 month leave



# **Human Rights**

### **Fundamental Approach and Issue Awareness**

The JERA Group bears an important responsibility of high public interest in supporting society and the economy providing a stable supply of energy. As a company with a global value chain spanning upstream development to transportation, storage, power generation, and sales, we strive to maintain and expand a stable supply chain at a time when human rights issues such as harassment, discrimination, and poor working conditions become increasingly urgent. We recognize the importance of promoting human rights efforts for us to meet our responsibilities of stable maintenance and expansion of a value chain that supports Japan's energy and helps solve the world's energy issues. We also believe that employees can only reach their full potential in a comfortable work environment free from discrimination and harassment. The JERA Group is committed to acting with integrity and respect for human rights based on the highest ethical standards to fulfill our mission as a global company.

JERA Group Human Rights Policy https://www.jera.co.jp/english/corporate/compliance/human-rights-policy

# **JERA Group Human Rights Policy and System**

In April 2022, we established the "JERA Group Human Rights Policy" to serve as the cornerstone for achieving our philosophy. This policy was founded in accordance with international standards and social codes regarding human rights, such as the Universal Declaration of Human Rights and Guiding Principles on Business and Human Rights, and applies to all directors and employees of the JERA Group. We make continuous efforts so as not to be complicit in any human rights violations by considering the potential impacts that our activities may have on stakeholders, including our customers and communities. Accordingly, we are in the process of building an internal system to identify, prevent, mitigate, monitor, and correct any matters regarding human rights that require special attention. This policy has been made public on our website, disseminated internally,

and shared with JERA Group companies. We will continue sharing information on human rights activities in regular liaison meetings with our group companies.

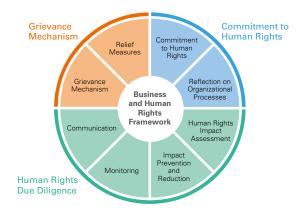
### **Human Rights Education and Training**

In August 2022, JERA conducted its first internal human rights training for all employees on topics including business and human rights risks, as well as harassment prevention. The training used case studies to introduce human rights issues that could impact corporate activities, key points to preventing harassment, and considerations for the LGBTQ+ community. Following the training, participants were also tested on their comprehension to raise and reinforce human rights awareness.

In addition to this human rights training, we will conduct regular education and awareness activities, such as seminars that align with Japan's Human Rights Week.

# Promotion of Human Rights Due Diligence and the Establishment and Operation of a Human **Rights System**

As we expand our business globally, we aim to establish a human rights due diligence (DD) mechanism that respects the rights of our supply chain and beyond. This mechanism is based on the UN Guiding Principles on Business and Human Rights, the OECD Due Diligence Guidance for Responsible Business Conduct, and Japan's National Action Plan on Business and Human Rights. In FY2021, through the advice and cooperation of outside experts, we identified and segmented those issues considered to have a significant negative impact according to past human rights incidents and reports issued by government agencies and human rights NGOs. We looked at efforts implemented to address these issues, measured our progress and planned our direction based on the results of these efforts, and kept management informed via our internal Risk Management Committee and the Board of Directors.



# Relief Mechanisms for Human Rights and Other Issues

In FY2021, JERA established its Internal Rules for Harassment Prevention to maintain a healthy work environment for its employees. Our employment regulations prohibit any inappropriate behavior that infringes on human rights, such as sexual harassment and power abuse, and provide for disciplinary measures that include dismissal. The Internal Rules for Harassment Prevention are designed to delineate specific examples of inappropriate behavior and clearly stipulate the responses and other actions available in these cases.

In accordance with these internal rules, consultation services have been established internally at our Labor Affairs and Human Resources Group and externally at partner legal offices to address harassment and other inappropriate behavior infringing on human rights. The Labor Affairs and Human Resources Group responds accordingly in cooperation with the relevant workplace parties and, if necessary, consults with outside legal counsel.

From FY2022, our consultation desks will expand and be open to JERA Group companies and business partners.

# **Coexisting with Local Communities**

In addition to global issues such as climate change, countries and regions face increasingly severe endemic problems such as poverty, inequality, limited resources, and demographic changes. Our operations have a broad international reach, and we recognize the importance of leading the way to find solutions to these issues in cooperation with each region and community.

As a company focused on working responsibly with local communities, we formulated a Social Contribution Activity Policy last year to contribute to realizing a sustainable society. Specifically, we have positioned "coexisting with the environment," "educating the next generation," and "resolving community issues" as our areas of focus within social contribution and are committed to ensuring accountability by communicating and working closely with local communities.

As we move forward, we will continue leveraging our strengths to address and resolve the problems faced by people in every region. We will also strengthen our relationships with stakeholders and strive to create a virtuous cycle that builds social trust and enhances our corporate value.



Hiroshi Oyabu Senior Managing Executive Officer Business Support & Solutions and Secretariat

# **Social Contribution Activity Policy**

(Established July 2021)

#### [Basic Policy]

The JERA Group aims to engage proactively in social contribution activities, build strong relationships of trust with regional communities and other stakeholders, and achieve sustainable development with local communities as it conducts business globally. Our social contribution activities 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 that leverage the strengths of the entire JERA Group.

#### Purpose of Activities

The purpose of our social contribution is the creation of a continuous virtuous cycle in which trust between JERA and our stakeholders contributes to the realization of a sustainable society, which in turn enhances corporate value.

#### Areas of Focus

Aiming to realize a sustainable society, we will engage in activities prioritizing the following three areas: "coexisting with the environment," "educating the next generation," and "resolving community issues."

# 1 Coexisting 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 Educating the Next Generation

We will pass on the skills and expertise gained through business operations to the next generation and contribute to the education of individuals who can lead the future of energy globally.

# 3 Resolving Community Issues

We will help resolve the many issues facing countries and regions where we do business, including increasing disaster preparedness, creating jobs, and reducing the number of communities without electricity.

# Support for Employee Social Contribution

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

#### Collaboration with Stakeholders

We will communicate with stakeholders as we work to address various social issues.

#### Information Disclosure

We will proactively disseminate information about our Social Contribution Activity Policy and associated efforts via our website and reports.

# **Coexisting with Local Communities**

# Coexisting with the Environment

# **Environmental Conservation and Landscape 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. Landscape simulations help us select the shapes and colors for our plants' chimneys. In addition, to achieve balance with nature, we also proactively plant trees at power plant sites, many of which have 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 with affiliates and local governments to conduct cleanup and environmental beautification activities in the surrounding communities. Despite restrictions during the COVID-19 pandemic, 757 employees participated in environmental beautification activities in FY2021.

In addition, just as the year prior, we conducted beach cleanup activities in Akita Prefecture in cooperation with local residents and the players and staff of the Aranmare women's basketball team—in which JERA holds an equity stake.

# **Educating the Next Generation**

#### **Power Plant Tours**

Even amid the COVID-19 pandemic, we made sure that visitors were still able to tour our plants online. A total of 1,486 attended online tours of the Hirono Thermal Power Station and Kawasaki Thermal Power Station. Designed to make learning enjoyable for both parents and children, these virtual tours cover a range of content, from lessons on electricity used in daily life to experiments and guizzes. The virtual tours were a hit with parents and children alike.

# Support for SAKURA Tempesta, a Robotics Team for Junior **High and High School Students**

SAKURA Tempesta is one of the most notable robotics teams in Japan. In the 2018 FIRST Robotics Competition—the world's most prominent international robotics competition—SAKURA Tempesta received the Rookie Inspiration Award, given to a rookie team with outstanding success in advancing respect and appreciation for engineering and engineers.

As a sponsor of SAKURA Tempesta, JERA is working with the team on community contribution activities and workshops to promote STEAM\* education for young people.

\* STEAM fields: Science, technology, engineering, art and architecture, and mathematics



#### **Continuing Our 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 to contribute to the education of the next generation who will lead economic growth in Asia.

In FY2020 and continuing in FY2021, we provided scholarships to students from various Asian countries studying at the International University of Japan, which has engaged in the education of global talent for many years.

# **Resolving Community Issues**

### Assistance to Prevent the Spread of COVID-19

In response to the global COVID-19 pandemic, we have supported measures to prevent the infection and spread of the virus in Asia. In FY2020, we provided free medical supplies to Bangladesh, including emergency vehicles, respirators, and personal protective equipment such as protective clothing and masks.

In FY2021, we donated to the COVID-19 prevention fund in Hai Phong City, Vietnam, in response to a rapid increase in new cases there.

Note: In August 2020, JERA and ExxonMobil concluded a Memorandum of Understanding for the development of an integrated LNG-to-power project in Hai Phong City, and in October 2020, ExxonMobil and Hai Phong City concluded a Memorandum of Understanding concerning the development of the project in the city.

#### Overseas/Affiliate Initiatives and Contributions to SDGs

We invested in TeaM Energy Corporation, an affiliate in the Philippines, which is working to solve social issues in that country (JERA and Marubeni each have a 50% stake). Specifically, through TeaM Energy Foundation, Inc., a non-profit corporation, we have sought to alleviate poverty, protect the environment, and provide support for education and medical care by providing electricity to areas and homes previously without power as part of various multi-year initiatives.



Public Relations and JERA's Denryoku-Kan (Museum of Electricity) (Japanese) https://www.jera.co.jp/corporate/pr



Power Plant Tour Information (Japanese) https://www.jera.co.jp/node/17

# Safety and Health



Target number of occupational fatalities:



# Fostering a Culture of Safety

To ensure that safety is the top priority in our business activities, we aim to realize a work culture in which all personnel at our job sites share our safety philosophy and call on one another to work together toward creating safe workplaces.

To foster such a culture of safety, we are expanding activities in which officers visit power plants, construction sites, and other workplaces to directly explain our approach to safety. We have also established a safety enhancement period when we conduct various safety awareness initiatives and hold commendation ceremonies for the safety efforts undertaken by employees and subcontractors working at our job sites.

# Safety: The Highest Priority in Everything We Do

Our mission is to provide cutting-edge solutions to the world's energy issues. As power generation and fuel facilities operate under high-pressure conditions using complex machinery, it is essential to eliminate life-threatening risks, ensure the safety of all involved personnel, and provide stable energy during operation and maintenance periods.

To this end, at the close of FY2020, we formulated a safety philosophy and safety policies to ensure that we pursue

business activities based on the premise of "Safety First" in the entirety of our supply chains, from upstream fuel procurement to electricity sales. We are also committed to pursuing further safety measures to ensure peace of mind for everyone in society.

Our officers and employees are working together to build a culture of safety. We are developing various measures to achieve our goal of zero accidents so that all those involved in our businesses can return home healthy and injury free.

#### [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.

#### [Safety Policies]

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

# **New Initiatives for Achieving Zero Accidents**

Guided by our annual safety plans, JERA is expanding workplace-wide safety activities to achieve our target of zero accidents. Power generation and fuel facilities contain many pieces of machinery and equipment. It is critical to understand the potential dangers of each and take appropriate safety measures during patrols, facility maintenance, and other on-site work.

In recent years, we have seen more and more partner company employees with little experience working at our job sites. We have been conducting risk simulation training utilizing VR technology for these employees to increase their sensitivity to danger while promptly sharing safety information to prevent the repeated occurrence of similar incidents.

#### Major Safety Initiatives in FY2022

#### **Priority Action Items**

Leadership:

employees

#### creating a culture of safety based on mutual Clarification of our safety activity strategies and facilitation of safety awareness among all

Organizational Structure: Establishment of a robust system for safety activities

**Business Operations:** mplementation of policies for the creation of safe workplaces

#### **Major Initiatives**

- Developed safety activity strategies aimed at
- awareness building Formed safety committees and held workshops to foster safety awareness
- Facilitated safety awareness among all employees through safety-related events
- Constructed a structure for promoting safety activities involving overseas group companies Strengthened cooperation with stakeholders
- Enhanced and utilized information regarding safety
- Carried out effective safety activities for accidentfree, safe workplaces

# Safety and Health

### **Promoting Health Management**

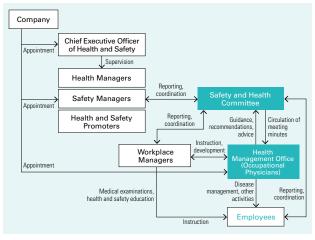
Based on the recognition that health and safety are the foundation of our business operations, we have established a health and safety management system supervised by the president to promote health and safety as one of our most important management issues. Action plans for health and safety are established at each business site and led by the responsible department at each site as part of our efforts to promote initiatives aimed at maintaining and improving the health of employees.

In FY2021, in addition to measures aimed at curtailing mental health problems and lifestyle diseases, we made substantial efforts to prevent the spread of COVID-19. Going forward, we will continue to promote work-life balance and establish various measures for the prevention, early detection, and early treatment of diseases to create an environment in which employees can take on challenges in good health and with a sense of security.

#### Main Achievements of Health and Safety Activities in FY2021



### **Health and Safety Management Structure**



\*Some workplaces with under 50 employees do not have a Safety and Health Committee

# Safe and Stable Operations

We expend every effort to ensure the safe and stable operations of our thermal power plants by monitoring them 24 hours a day from a central control room. We perform daily inspections to swiftly discover any abnormalities, conducting rigorous visual inspections of our facilities and checking each piece of equipment to ensure that we catch even the slightest variations in temperature, vibrations, abnormal noises, etc.

We also conduct regular inspections, including operator inspections as required by the Electricity Business Act of Japan and our own routine inspections, to ensure that our facilities operate safely. Together with our affiliates, we have systems in place to ensure the quickest possible restoration of operations in the unlikely event that a problem occurs during operation.

# **Safety Measures for Equipment**

Our thermal power plants handle many dangerous substances, which we handle appropriately 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 appropriate to the size of the plant.

#### 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 with the Rules of Quality Assurance for the Safety of Thermal Power Plants (Japan Electric Association Code, JEAC). We confirm seismic resistance through periodic facility inspections after construction. We also implement individual measures in light of facility damage caused by past earthquakes.

Additionally, we evaluate the seismic resistance of essential facilities at each power plant and implement measures such as seismic reinforcement to avoid long-term shutdowns due to collapse or earthquake damage and stay abreast of the latest developments in safety.

# **Safety Measures for LNG Receiving Terminals**

At our LNG receiving terminals, in preparation for the unlikely event of an LNG leakage, we implement safety measures based on the following three concepts: (1) leakage prevention, (2) early leakage detection, and (3) prevention of leakage expansion. We also make considerations for the handling of fire. For example, we adopted explosion-proof structures for electrical equipment surrounding LNG facilities and restricted the use of products that may cause fire by designating control zones.

We have a proven track record of safety over more than 50 years since the introduction of LNG and are committed to making every effort to keep enhancing our safety measures and ensure safe operations.

More effective reporting systems

# **Stakeholder Engagement**



# **Fundamental Approach**

At JERA, we are committed to proactive communication with our stakeholders, who include customers, business partners, local communities, shareholders, and investors, among others. This allows us to better understand their needs and expectations to fulfill our corporate social responsibility and to act in good faith on their behalf.

Healthy two-way communication with our stakeholders will continue to inform and improve our operations and services going forward. Furthermore, our efforts to disclose both financial and non-financial information in a timely, appropriate manner lead to proper assessment by our stakeholders in addition to helping us achieve sustainable growth and maximize our corporate value.

Main Stakeholders	Demands & Expectations	Initiatives	Outcomes
Customers	<ul> <li>Stable energy supply</li> <li>Customer experience satisfaction</li> <li>Decarbonization and renewable energy adoption and expansion</li> <li>Promotion of ESG initiatives</li> </ul>	We deliver a stable energy supply to customers worldwide by building infrastructure undeterred by geopolitical factors and climate changes that can upset the supply-demand balance, leveraging cutting-edge value chain solutions spanning fuel procurement, power generation, and electric and gas sales. Our services promote a transition to a decarbonized energy model based on ESG-conscious business operations in order to meet customer expectations and earn their trust.	<ul> <li>Improved sales performance</li> <li>Enhanced website</li> </ul>
Business Partners	<ul> <li>Environmentally and socially responsible procurement and outsourcing</li> <li>Fair and equitable trade</li> <li>Stronger collaboration</li> </ul>	We promote environmentally and socially responsible procurement and partnership practices, which help us fulfill our corporate social responsibility and engage in fair, equitable trade with suppliers.  Mutual understanding and close communication are the cornerstones of growth and development with our suppliers and partners.	Contract compliance review     Procurement policy briefings     Domestic and international business collaborations
Local Communities	Environmentally responsible business operations     Respect for human rights in local communities     Local economic contribution     Local job creation and skills development	We build strong bonds of trust through active dialogue with local stakeholders to achieve sustainable development alongside communities in Japan and abroad, including those that host our power plants.  We are committed to the development of society through social contributions tailored to local communities and business activities that respect the nature, history, culture, and customs of each country and region in which we conduct business.	<ul> <li>Participation in local community events</li> <li>Scholarship programs and power plant tours</li> <li>Assistance to prevent the spread of COVID-19</li> </ul>
Shareholders & Investors	Enhanced corporate value     Enhanced earning power	We are further augmenting company reporting and seek to expand and deepen understanding through dialogue with capital market participants, including shareholders, institutional investors, rating agencies, securities firms, and ESG evaluation providers, to match expectations through enhanced corporate value.	Shareholders meetings     IR briefings     One-on-One and group IR meetings     Issuing of reports
Employees	Recruitment and training of a strategic global workforce of professionals Workplace and employee health and safety Empowerment of diverse talent Promotion of work-life balance Elimination of discrimination and harassment	Human rights are at the heart of our efforts. We ensure the health and safety of our employees and create a safe and comfortable working environment.  We continue to maximize opportunities for our diverse talent to choose career paths and work styles that allow them to reach their full potential while actively promoting measures to hire a global and career-focused workforce that empowers women, individuals with disabilities, and beyond.	Inclusive corporate culture Independent career development support Promotion of work styles that meet ever-changing needs Online recruitment via our website Employee satisfaction

survey

# **Corporate Governance**

### **Fundamental Approach**

Our fundamental corporate governance philosophy is to maintain a strong and sound management and financial structure trusted by the international energy market while ensuring an autonomous and independent corporate culture and a management system that allows us to make fair and prompt decisions.

Toward this end, we established our Corporate Governance Guidelines in October 2019 for building and implementing an appropriate corporate governance system and are continuously working to strengthen and enhance it.

#### **Issue Awareness**

To achieve sustainable corporate growth and improve corporate value over the medium to long term, a company must implement corporate governance so as to support accurate decisionmaking by management. The environment surrounding our company is changing rapidly amid the emergence of global trends toward energy security and decarbonization. As this happens, we are expected to work on various governance issues with a sense of urgency through such means as facilitating a better functioning Board of Directors, empowering diverse talent, and enhancing initiatives to address issues related to sustainability.

We will strive to continuously enhance governance to earn the trust of our shareholders, investors, and other stakeholders.

Corporate Governance Guidelines https://www.jera.co.jp/english/corporate/corporate\_governance/

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

#### **Overview of Corporate Governance**

Term of office: 1 year Term of office: 4 years

Organizational design: Company with corporate auditors Statutory Auditor 20 Panel meetings: Board of Directors meetings: 26 Corporate auditors: 3 Directors: 10 Attendance Attendance. Corporate Corporate Outside Directors: auditors: auditors: Outside corporate auditors: directors: **100**%

#### **Corporate Governance Structure** (As of July 1, 2022) **Shareholders** General Meeting of Shareholders Planning Division Human Resources Division Audit Statutory Auditor Pane **Board of Directors** Business Management Division Report Corporate auditors: 3 Directors: 10 Domestic Business Management & Development Division Financial Renewable Energy & Overseas Directors' Discussion Audit Power Development Division Coordina: Supervise Nomination and Accounting Auditor Resource Procurement & Investment Compensation Division Committee Optimization Division **Executive System** Internal Audit Department **Energy Solutions Division** Leadership Panel Chair and President LNG Contract Management Division O&M Engineering Division East Japan Branch **Expert Committees** (e.g., Investment Valuation Committee) West Japan Branch

# **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 intimately familiar with our business and outside directors who have extensive knowledge and experience—make material business decisions and supervise the execution of business operations. Further, JERA has corporate auditors as independent officers who are responsible for auditing the execution of the Directors' duties.

In addition, JERA has adopted a system in which executive officers are responsible for business execution based on the decisions made by the board. This separates the decisionmaking and supervision of management from business execution and produces accurate, prompt decision-making and efficient business execution.

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

The Board of Directors makes decisions on management targets, business strategies, and other important management matters based on applicable laws and regulations, our Articles of Incorporation, and our internal rules. It also supervises the execution of business operations.

In addition, we believe that in order to expand our business throughout the world in a wide range of fields, we will have to respond quickly and appropriately to the business environment and ensure the objectivity and soundness of our decisions. As such, in addition to directors who work for JERA or started as shareholders, we hire directors who are neither to ensure diversity of knowledge, experience, and other attributes among the board.

# **Corporate Governance**

### **Support for Directors**

We have established a system that provides directors with the support they need to perform the duties expected of them. Among other benefits, the system provides each director with comprehensive, accurate information, as well as opportunities to learn more about our company's core businesses from outside experts around the world.

In FY2021, outside experts were consulted on ESG, DX, trading, technical strategy, and other areas requiring a high level of expertise to obtain advice based on their knowledge and experience. This, along with other efforts, brought progressiveness and depth to discussions of the Board of Directors and provided us with knowledge that will contribute to further business development.

Furthermore, we covered a wide range of topics during several discussions of key management issues such as decarbonization strategies, global human resource strategies, financial strategies, and regional strategies on our journey to establish a new vision and environmental targets in FY2021.

### **Evaluating Board Effectiveness**

In order to tie our efforts into continuous improvement of the effectiveness of the Board of Directors, we conduct an annual survey among all directors and corporate auditors, asking them to consider the state of deliberations and operations of the Board of Directors. The Board of Directors analyzes and evaluates the results of these surveys, considers and implements measures to address the issues identified, and constantly strives to improve the effective functioning of the Board of Directors.

#### Improving Board of Directors' operations

In FY2021, we reviewed the standards for proposals and reporting at the Board of Directors and implemented measures that included coming up with a new structure for the materials (i.e., creating guidelines) from a strategic perspective. At the same time, we discussed and reviewed regular reports on major changes in the business environment and how they impacted management and our ability to respond more effectively.

#### Enhancing opportunities for outside directors to learn about operations

We provide explanations of the agenda for board meetings in advance and share information on institutional and market trends and news reports related to the energy industry so that outside directors can actively participate in discussions and enhance deliberations.

#### Self-assessment

Although we saw some positive results in the enhancement of strategic discussions, support for advance briefings and other information delivery, and the management of meetings amid the

ongoing COVID-19 pandemic, our assessment is that further enhancement is necessary.

#### **Future issues**

In FY2022, we will enhance discussions at meetings of the Board of Directors by sharing an overview of deliberations at the Leadership Panel. At the same time, we will work to improve the effectiveness of the Board of Directors by resuming in-person meetings and carrying out power plant tours and other such efforts while taking precautions against COVID-19.

#### **Leadership Panel and Expert Committees**

JERA has established a Leadership Panel that consists of the chair, the president, and officers in charge as a forum for deliberating on and deciding important management matters and receiving necessary reports based on the policies set by the Board of Directors.

Moreover, expert committees have been established as subsidiary bodies to the Leadership Panel—in principle, one for each major field under its purview—to provide advice to the Leadership Panel from an expert perspective and support its deliberations. In principle, all matters to be proposed and reported to the Board of Directors are discussed and decided by the Leadership Panel based on advice from the relevant expert committees. The results of deliberations by the Leadership Panel are reported to the Board of Directors, along with advice from the expert committees.

# **Strengthening of JERA Group Governance**

JERA provides appropriate support to group companies so that they can autonomously develop and operate systems suitable to their business. Specifically, we strive to ensure that group companies can make efficient decisions and execute their duties swiftly and appropriately by clarifying responsibilities and authority within our Affiliate Management Regulations and other internal rules. In accordance with the Affiliate Management Regulations, JERA has established a system for prior consultation and reporting from group companies on important matters concerning the execution of duties.

In FY2021, in order to establish a more advanced internal control system for the entire group, we worked to support the development of a system of rules and regulations for group companies and strengthen the group company management system.

In FY2022, we are continuing to strengthen group governance by checking the status of those operations and other such efforts. We also carry out regular education and training for newly appointed officers and candidates, including those of group companies, to deepen their understanding of our vision for governance and the roles and responsibilities expected of directors and corporate auditors.

# **Corporate Governance**

# The Strong Board of Directors Behind JERA's Autonomous Management System



#### **David Crane**

Outside Director, JERA Co., Inc.

He began his career as an attorney at White & Case law firm and has managed several energy companies. He joined JERA as a member of the Board of Directors in April 2020. In August 2022, he was nominated by the President of the United States as Under Secretary for Infrastructure, U.S. Department of Energy.

### **Both Shareholder Companies Respect JERA's Autonomous Management**

JERA is a privately owned joint venture owned in equal parts by TEPCO Fuel & Power., Inc. and Chubu Electric Power Co., Inc. The two partners could elect to run JERA directly, without any outside influence whatsoever. However, they chose to arrange for JERA to be governed by a Board of Directors, constituted of international and Japanese members each of whom has decades of experience and expertise in the energy field.

This willingness to submit itself voluntarily to a Board made up of an appropriate mix of highly engaged inside and independent directors makes JERA quite special from a corporate governance perspective.

JERA is an important company - an impactful company - not just in Japan but internationally. It is certainly the largest LNG and power generation company in Japan and one of the largest, if not the largest, in the world. And energy is a business where being large scale matters, particularly now as the world population approaches 8 billion people and we, collectively, have to find a way to give those 8 billion people the opportunity to live a modern lifestyle powered by electricity which is not only safe, affordable and reliable but also zero carbon.

That is why I was honored to join the JERA Board of Directors: the Company's vision and mission and core values closely matched my own. JERA's executive team is deeply committed to the proposition that JERA will be a global leader in the fight to decarbonize the electricity business at scale. Moreover, JERA has the technical expertise, the operational capability, the commercial

acumen and the financial scale needed to find the best energy solutions to the economic, environmental and geopolitical challenges we face in these volatile times.

# Lively Discussions at the "Directors' Discussions"

The JERA Board works hard to do its part. We meet frequently, in formal session, to perform the normal oversight and administrative roles associated with good corporate governance. Since the energy industry is a very capital intensive industry, we are regularly called upon to review and consider for approval proposals put forth by JERA management with respect to the raising and deployment of capital. These investment decisions often relate to new energy projects or potential acquisitions of strategic businesses as the Company moves aggressively to diversify itself geographically and expand its technological experience and know how. But we also make time, on a regular basis, for "Directors' Discussions," during which we have longer, more informal discussions about the long term strategic issues and opportunities facing JERA. It is during these sessions where, I feel, we have had a more lasting impact on the direction of the Company, whether it was the decision in 2020 to become one of the first Japanese energy companies to make a long term net zero CO2 commitment or whether it has been our input into shaping the Asian and North American regional strategies so that they fit seamlessly into JERA's approach to the fast evolving Japanese energy market.

#### The Best is Yet to Come

I have been involved with JERA, in one capacity or another, almost since its inception and it has been extraordinarily rewarding to me personally to have been a witness to what JERA already has accomplished. In a very short period, JERA has established its internal culture and found its identity as a truly 21st century enlightened energy company, separate and distinct from its two illustrious shareholders. I had been excited to continue on the JERA journey as an independent director because I am convinced that, for JERA, the best is yet to come. However, I have been called upon by my own Government, to join the US Department of Energy to work on bringing new technologies and 21st century clean energy infrastructure to fruition. So I leave the JERA Board with a heavy heart but with an innate sense of optimism that JERA is well on the path to ultimate success and, not only JERA customers, but the global community at large, will benefit from JERA's success.

<sup>\*</sup>This contribution is as of August 2022. Mr. David Crane retired as a director of JERA as of September 5, 2022.

## **Risk Management**

### **Fundamental Approach and Issue Awareness**

JERA continues to work toward highly effective risk management as we seek to gain a proper understanding of and prevent the risks associated with our corporate activities and want to minimize loss should these risks materialize. We view these efforts as underpinning the enhancement of our corporate value and the fulfillment of our social responsibility to our stakeholders.

Potential risks that could have a significant impact on our corporate activities include operational accidents, damage to facilities due to natural disasters, shutdowns or construction delays, and threats such as cyber-attacks and malware on power plant control and other systems.

In addition, with the advent of the global economy and the shift toward borderless economic activity, we must respond appropriately to increasingly diverse and complex risks today, including global risks such as inequality, poverty, and political instability.

The JERA Group is committed to the continued enhancement of our risk management to fulfill our social responsibility as an energy company that supports social infrastructure.

### **Risk Management System**

#### **Risk Management System**

We have established a highly effective risk management system headed by the company president to ensure that we can provide a stable supply of energy in addition to other important social responsibilities.

In non-emergency situations, our fundamental approach to risks associated with our business activities is to manage them within the execution of duties by the unit responsible for the operations. When the risk affects multiple divisions, we manage it appropriately in a cross-organizational manner. In the event of a crisis, an emergency task force headed by the company president is deployed to respond quickly and

appropriately to minimize the impact on our business.

In addition, the Financial Strategy and Planning Group, which serves as the risk management division at JERA, is organizationally and structurally independent from each department that conducts business, contributing to healthy tension within the system.

### Reporting to the Risk Management Committee, the Leadership Panel, and the Board of Directors

The Risk Management Committee, chaired by the president, meets quarterly and is attended by several parties to ensure appropriate monitoring of risks (see Risk Management Structure below). These include the officer in charge of each division, corporate auditors, the Internal Audit Group, the Financial Strategy and Planning Group (risk management

division), and the General Affairs Group (crisis response division), among others. In particular, we strive to prevent risks from materializing by reporting on our policies and specific measures for dealing with risks that could significantly impact our business. In the unlikely event that a risk materializes, the necessary reports on the response of the emergency task force are provided quarterly.

Discussions at the Risk Management Committee are reported to the Leadership Panel and the Board of Directors each time, reflecting the opinions of executive officers, directors, and outside directors.

In addition, all outside directors receive an explanation of the company's risk management system and methods upon appointment, and their opinions are incorporated through exchanges of views and other means.

#### **Risk Management Structure**

(As of July 31, 2022)



#### **Risk Assessment Flowchart**

Board of Directors

Leadership Panel

**Risk Management Committee** 

Deliberation and affirmation of management status and response policies for "significant risks subject to review by senior management"

## **Selection of Significant Risks**

Selection, affirmation, and evaluation of "significant risks subject to review by senior management"

### Risk Identification-Evaluation

Divisions, groups, and offices create risk scenarios that the Risk Management Committee Executive Office reorganizes to create a risk map

#### Main Risk Categories

Operational Accidents

2 Financial

3 Regulations / Legal Amendments / Geopolitics

4 External Stakeholders

6 Management Strategy

6 Labor Affairs / Human Resources

7 Input / Output

8 Product / Energy Prices

 Natural Disasters / Investment Management

10 Riots / Crime

Operation Cybersecurity

Legal Affairs / Ethics

(B) Environment / Climate

Change

## **Risk Management**

### **Highly Effective Risk Management**

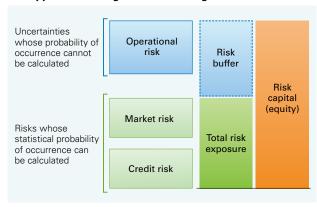
Our approach to risk management is based on combining the functions of integrated risk management, evaluation of financial soundness, and evaluation of individual investments.

#### **Integrated Risk Management**

We quantify our total risk exposure based on market risk and credit risk.

The difference between total risk exposure and risk capital is calculated as a risk buffer. This risk buffer is maintained at a certain level by considering operational risk as an uncertainty whose probability of occurrence is incalculable.

#### **Our Approach to Integrated Risk Management**

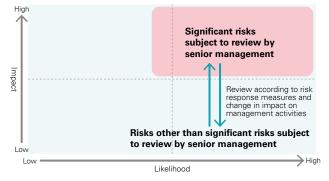


Operational risk is managed using a risk map with impact on management activities on the vertical axis and frequency of occurrence on the horizontal axis. For each managed risk, we take measures such as retention, mitigation, and transference in cooperation with each department and the Financial Strategy and Planning Group, depending on the type and characteristics of the risk

Among operational risks, risks that have a high impact on management activities and a high frequency of occurrence are identified as significant risks subject to review by senior management.

The Risk Management Committee, the Leadership Panel, and the Board of Directors meet quarterly to discuss the amount of integrated risk as well as policies and specific measures to address these significant risks subject to review by senior management in particular.

#### Risk Heat Map



#### **Evaluation of Financial Soundness**

In our evaluation of financial soundness, we use the rating methodologies of rating agencies to evaluate the long-term outlook for financial rating levels in the business planning workflow and implement balance sheet management to maintain a financial rating of A through FY2025. (Please refer to the "Financial Strategy" section on p.41 in the "Message from the CFO on Financial Strategy.")

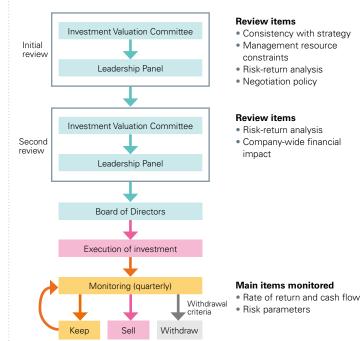
#### **Evaluation of Individual Investments**

After confirming the consistency of individual investment evaluations with our field-specific investment strategies, our Investment Valuation Committee, which includes members with experience in investment screening at financial institutions and other organizations, conducts reviews by which we verify the long-term investment potential.

In addition, we properly evaluate and manage risks by engaging in regular monitoring and establishing withdrawal criteria.

Our risk-return analysis utilizes more than 200 guideline rates calculated for each strategic target country and business.

#### **Investment Valuation Process**



## **Risk Management**

### **Countermeasures for Large-Scale Disasters**

We own around half of the thermal power plants in Japan. Based on the Basic Act on Disaster Management, we have put together and published our Operational Disaster Risk Reduction Plan, Operational Plan for the Protection of Citizens, and Operational Plan for COVID-19 and Other Pandemic Countermeasures. We also have emergency and disaster response rules and manuals in place to enable prompt decisionmaking and a swift response in the event of an emergency.

Recently, there has been concern regarding natural disasters such as earthquakes occurring directly beneath the Tokyo metropolitan area or off the Nankai Trough and an eruption of Mt. Fuji, which has prompted revisions by the national and local governments to damage estimates and disaster risk reduction measures. In light of these revisions, we are undertaking the necessary measures, such as earthquake-proofing our facilities in addition to periodically conducting drills to simulate large-scale disasters.

JERA-BCP drills include alternative strategy drills envisioning transportation disruptions and communication outages, such as drills for information sharing between both of our shareholders and we are constantly making efforts to improve our disaster risk reduction capabilities.

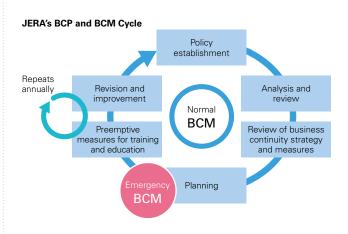
### Enhancement of JERA's BCP and BCM

As described above, JERA has a response system in place for the event of a major disaster. In light of the expansion of our business domains after integrating our thermal power business in 2019 and other changes in the business environment, we are taking various steps to further improve business continuity.

In the event of a large-scale disaster, we must ensure that the JERA Group's important business operations are not interrupted or, if interrupted, that they are restored in the shortest possible time. And so, we have established Business Continuity Management (BCM) Rules to strengthen our

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

- In the event of any disaster or risk event, we will place the highest priority on the safety and security of people and ensure public safety in compliance with laws and regulations.
- In order to fulfill our responsibility as an energy provider supporting the social infrastructure in Japan, we will contribute to society and local communities by quickly restoring and continuing our core business of supplying them with electricity and gas.



everyday management activities.

Based on these rules, we have established the BCM Subcommittee, which reports to the Risk Management Committee regarding the establishment and review of the Business Continuity Plan (BCP) and regularly checks progress on disaster drills and advance measures.

## **COVID-19 Response**

Considering the global nature of our business activities, JERA has always provided employees with laptop computers and smartphones, and we have built IT infrastructure that enables our employees to stay connected no matter where they are in the world. Accordingly, we were able to offer remote work as the COVID-19 situation developed. As many as 90% of our employees were working remotely, yet we were able to

maintain a stable power supply while protecting against infection. (Many power plant employees and other staff who needed to be on-site to perform their duties are not included in this figure.)

#### Featured-

## Achieving Food Security for Business Continuity

Food security is vital for business continuity and those who have difficulty returning home after a large-scale disaster. We have prepared emergency rations, and we have various offerings that cater to the needs of our global workforce. Our JERA One-Day Disaster Food Kits include halal and allergy-friendly options that cater to the diverse needs of our employees.

These kits were developed with the aim of ensuring efficient management and distribution, compact yet full of sustenance for an entire day. Ultimately, we plan to coordinate with municipalities and food banks to ensure they are used effectively.

We plan to make these kits available to local communities and employees by spring 2023.





## **Information Security**

### **Fundamental Approach**

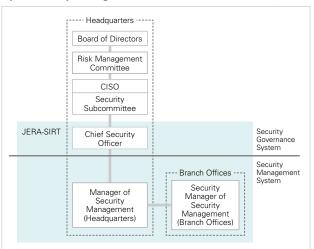
Our approach to information security aims to enrich the lives of people around the world and improve industrial and economic vitality through the supply of internationally competitive electric power and energy. The use of information technology is indispensable for achieving this, and we have established the JERA Group Information Security Basic Policy to protect our information assets and enhance the safety of transactions as we implement information security measures.

### **Cybersecurity Management System**

To promote cybersecurity, we have established a system for managing cybersecurity risks under the responsibility of senior management. We have also established a Security Subcommittee under the responsibility of the Chief Information Security Officer (CISO) to promote cybersecurity at all times while coordinating with the Risk

#### **Cybersecurity Management Structure**

(as of July1, 2022)



Management Committee, which serves as the overall risk management system.

Moreover, we have established security management functions and a security incident response team (SIRT) to assist the CISO and management in overseeing cross-organizational security measures and incident response.

### **Enhancing Information Security Measures**

The Basic Policy on Information Security covers all personnel engaged in JERA business activities and all physical, environmental, and other resources used in our operations. Based on this policy, we are responsible for the proper handling and protection of related information assets and are working to strengthen our security measures to respond to cyberattacks and other threats.

We continuously educate all employees who handle information assets to raise their awareness of information security and improve their skill level. Our aim is to ensure thorough compliance with laws and regulations, this policy, and related rules and regulations.

In addition, all employees are given a "security card" that outlines compliance matters to raise awareness of information security and to ensure a swift response in the event of an information security incident.

Moreover, we conduct ongoing training related to targeted email attacks for all employees and offer e-learning and other programs to reduce the risk of information leaks and computer viruses arising from such attacks. There continued to be no serious incidents related to information security or the protection of personal information in FY2021.

Information security education and training against targeted email attacks provided in FY2021 is as follows:

#### **Education & Training on Information Security (FY2021)**

#### **Security Education**

Scope: 3,738 participants (including directors, employees, and temporary staff)

Frequency: Once a year Method: e-learning program

#### **Targeted Email Attack Training**

Scope: 4,066 participants (including directors, employees, and temporary staff)

Frequency: Once a year

Method: Fmail

We have put together a roadmap for future security measures, including a plan to establish a global security infrastructure to improve information security across the entire JERA Group.

At JERA, we have enhanced the security of servers accessible to the public and implemented measures to prevent and analyze malicious attacks by hackers and others outside the company.

## **Enhancement of Information Security Measures for Domestic and Overseas Group** Companies

We also follow the Cybersecurity Management Guidelines established by the Ministry of Economy, Trade and Industry to review and implement security measures for the JERA Group. We also provide the same security education to domestic and overseas group companies at least once a year.

Furthermore, we conduct annual security risk assessments at each group company. We then evaluate and analyze the results, which inform improvement requests made to enhance the security of each of these companies.

## **Compliance**

#### **Fundamental Approach and Issue Awareness**

JERA is committed to earning and maintaining the trust of our stakeholders by operating in accordance with the high ethical standards expected of a global corporation. Under our JERA Group Compliance Policy and Compliance Code of Conduct, we will hold up our mission to provide cutting-edge solutions to the world's energy issues and ensure compliance with domestic and foreign laws and regulations.

As a part of the global energy value chain, we are expected to act with integrity and in a manner that aligns with domestic and international laws and regulations, demonstrating a heightened sense of ethics suitable to a worldwide corporation. Particularly in recent years, environmental and human rights issues in the supply chain are now being addressed in the context of compliance alongside issues in bribery and competition law. Our group is united in its commitment to compliance. Our officers and employees will continue to act in a manner befitting their responsibilities, even amid intense scrutiny of energy issues worldwide and drastic industry changes.



## **Compliance Program Framework**

We have established the Compliance Committee, chaired by the president, to promote compliance as the organization responsible for reviewing and deciding on various compliancerelated measures.

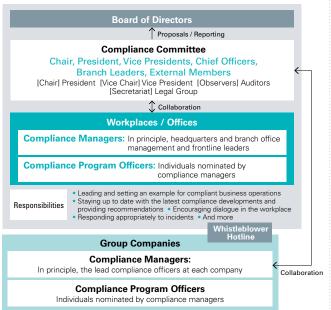
The committee comprises the chair, president, vice presidents, chief officers, branch leaders, labor union representatives, and ad-hoc committee members, including outside experts. Compliance measures considered by the committee,

as well as any specific investigations, corrective actions, and preventative measures, are submitted to the Board of Directors for discussion or reporting as necessary.

The Legal Group, which serves as the committee's secretariat, works closely with compliance managers and program officers at each workplace, office, and group company to promote compliance among staff, management, and everyone in between.

#### **Compliance Program Structure**

(As of August 31, 2022)



## **Compliance Training**

The Compliance Committee deliberates and decides on compliance-related measures for each fiscal year, taking into consideration the results of employee questionnaires and other factors, in order to implement a course of action in accordance with the "JERA Group Compliance Policy" and the

"JERA Group Compliance Code of Conduct."

In FY2021, we strengthened our efforts to promote compliance by focusing on better information delivery, including sharing messages from management, as well as enhanced training programs and the establishment of a group-wide compliance program framework.

#### **FY2021 Primary Compliance Initiatives**

Initiative	Results
Messages from Management	Updates from the Compliance Committee Chair and Vice Chair (delivered in April, October, and January)
Information Delivery	Compliance updates (monthly)     Awareness campaigns surrounding regulations on bribery and corruption (October, December)     Spotlight on the Whistleblower Hotline (October – March)
Training	<ul> <li>Compliance Training: "Compliance in an Era of Change" (March)</li> <li>Antitrust Law Training: "Unfair Trade Restrictions" (January</li> <li>Training on Internal Rules: "Anti-Bribery Regulations" (June</li> </ul>
	<ul> <li>Training for officers dispatched to new subsidiaries (July) and training for mid-career hires (July, March)</li> </ul>
Building the JERA Group Framework	Review of the group's compliance organization structure in consideration of the management structures at affiliated companies (year-round)     Group compliance meetings, both domestic and overseas (August, February)     Creation and testing of compliance website for domestic subsidiaries (from September)
Group Policy Development	<ul> <li>Formulation and publishing of the JERA Group Policy against Anti-Social Forces, JERA Group Human Rights Policy, and JERA Group Tax Policy (March)</li> </ul>
Questionnaires	Compliance awareness survey conducted in December in cooperation with an external organization (95.8% response rate with 3,903 of 4,076 potential participants responding)     82.2% of participants responded that they "fully understand" the content of the Compliance Policy and Compliance Code of Conduct

## **Corruption Prevention**

We have established standards of conduct to prevent corruption in the JERA Group Compliance Policy and JERA Group Compliance Code of Conduct.

In addition, to meet the objectives of the Compliance Policy and Code of Conduct, we have established "Anti-Bribery Regulations" and "Anti-Corruption Regulations." These policies

## **Compliance**

establish approval procedures for entertainment, gifts, and donations to domestic and foreign public officials or agents of those officials, delineate prohibited activities, and describe reporting procedures for the exchange of money or goods with business partners. Further, JERA raises awareness of these policies through an e-learning system, the Legal Group monitors and supervises related processes and operations. and the Compliance Committee receives reports on these and other efforts.

#### **Selections from the JERA Compliance Code of Conduct** notes on gifts, donations, and entertainment:

- We always maintain proper and healthy relationships with our business partners and do not provide them with money, gifts, entertainment, or any other economic benefits that exceed good
- 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 international laws and regulations and internal rules.
- We do not entertain, provide gifts, or provide any other economic benefits to public officials or anyone in an equivalent position, domestic or foreign.
- We do not make such 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 Just Trade with Suppliers (CSR- and ESG-Based Responsible Procurement)

We conduct our transactions and business activities in compliance with laws and regulations as well as with the principles of fairness and impartiality, both in Japan and overseas. We uphold free trade and market competition and conduct fair business in accordance with the Antimonopoly Act and relevant domestic and international laws and regulations.

In May 2022, we announced our "Declaration of Partnership Building," in which we express our commitment to promote collaboration and coexistence with business partners and value-creating businesses.

We have established a "Procurement Policy" alongside our acquisition activities. We are committed to responsible procurement in consideration of corporate social responsibility (CSR) and environmental, social, and corporate governance (ESG), including quality assurance, procurement cost reduction, compliance with laws, regulations, and corporate ethics, safety assurance, and business continuity planning (BCP). In addition, we hold briefing sessions about our procurement policies with suppliers to ensure mutual understanding and close communication. In listening to the opinions and requests of our suppliers, we strive to build even stronger relationships.



### **Whistleblower System and Harassment Consultation Hotline**

To prevent compliance violations and quickly detect and resolve any violations that do arise, we have established internal and external whistleblower hotlines for reporting on issues within the company. The hotline is available 24 hours a day for individuals to make anonymous or named reports via email or post. The scope of consultation and reporting services offered range from bribery and corruption to harassment, human rights violations, and acts that infringe on the reputation or social credibility of the group, as well as violations of laws, employment regulations, and internal company rules.

In July 2021, JERA established a new harassment consultation service to ask for advice or report harassment and other work-related issues.

In FY2021, the whistleblower hotline received 17 cases. while the harassment consultation hotline had 12.

In response to the enactment of the amended Whistleblower Protection Act (June 2022), JERA is strengthening its response system at its whistleblower and harassment consultation hotlines, as well as designating and providing training and education for a whistleblower response team.

To encourage the use of this whistleblower system, JERA guarantees compliance with the Whistleblower Protection Act. JERA continues to share information about the whistleblower system regularly and seeks to build trust through efforts such as assessment of intention, protecting confidentiality, and prohibiting discriminatory treatment or retaliation against whistleblowers.



### **Tax Compliance**

In February 2022, JERA established and announced to the public JERA Group Tax Policy, which outlines the company's fundamental position and aims to strengthen tax governance with management involvement.

In order to fulfill our ethical tax obligations and social responsibilities, we are committed to further reducing tax risk by strengthening our tax governance.



## **Directors & Officers**

#### Directors -



Reappointed

Chair Toshihiro Sano Board Meetings Attended: 26/26 (100%)

Apr. 1977 Joined Tokyo Electric Power Co., Inc. June 2014 Director, Vice President, Tokyo Electric

Power Co., Inc.

Apr. 2015 Director (non-executive), JERA Apr. 2016 Director, TEPCO Holdings, Inc.; President, TEPCO Fuel & Power, Inc.

Chair, TEPCO Fuel & Power, Inc.

Apr. 2019 Chair, JERA



Reappointed

President Satoshi Onoda Board Meetings Attended: 26/26 (100%)

Apr. 1980 Joined Chubu Electric Power Co., Inc. Apr. 2018 Executive Vice President, Chubu Electric Power Co., Inc.; President, Power Generation Company: Director (non-executive), JERA Director, Executive Vice President, Chubu

Electric Power Co., Inc. Apr. 2019 President, JERA



Reappointed Corporate Vice President Managing Executive Officer Director, Business Development Yukio Kani

Board Meetings Attended: 26/26 (100%)

Apr. 1986 Joined Tokyo Electric Power Co., Inc. Apr. 2013 Executive Officer, TEPCO

Managing Executive Officer, TEPCO; Vice President, TEPCO Fuel & Power, Inc.

Apr. 2016 Managing Director, JERA July 2016 Managing Director and Chief Strategy Officer,

JERA, Director (non-executive), TEPCO Fuel & Power Inc.

Apr. 2019 Corporate Vice President, Director, COO, Business Development Department, JERA Apr. 2020 Corporate Vice President, Director, Chief Operating Officer, Business Development

Department, JERA Apr. 2022 Corporate Vice President, Managing Executive Officer, Director, Business Development at JERA



Reappointed

Corporate Vice President. Managing Executive Officer. Director, Corporate Strategy Hisahide Okuda Board Meetings Attended: 26/26 (100%)

Apr. 1988 Joined Chubu Electric Power Co., Inc. July 2017 General Manager, Strategies & Alliances Office, Head of Corporate Planning & Strategy Division, Chubu

Managing Executive Officer, COO, Corporate Strategy Department, JERA

Managing Executive Officer, Director, COO, Corporate Strategy Department, JERA

Corporate Vice President, Managing Executive Officer, Director, COO, Corporate Strategy Department, JERA

Corporate Vice President, Managing Executive Officer, Director, Corporate Strategy, JERA



\*1. Indicates an outside director as defined in Article 2-15 of the Companies Act \*2. Indicates an outside auditor as defined in Article 2-16 of the Companies Act \*3. David Crane resigned from JERA's Board of Directors on September 5, 2022.

Reappointed Corporate Vice President Managing Executive Officer Director, CFO, Finance and

Kazuo Sakairi

Board Meetings Attended 25/26 (96.2%)

Apr. 1987 Joined Bank of Tokyo (now MUFG Bank, Ltd.) Jan. 1995 Vice President, Bank of Tokyo Trust Company

Nov. 2002 M&A Team Head, Corporate Advisory Department, Mitsubishi Securities (now Mitsubishi UFJ Morgan Stanley Securities)

June 2006 Senior Director, GCA Corporation (now Houlihan Lokey, Inc.)

Jan. 2015 Executive Officer, Managing Director, Head of Asia Region at GCA Corporation

Managing Executive Officer, Director, CFO, JERA

Apr. 2022 Corporate Vice President, Managing Executive Officer, Director, CFO, Finance and Accounting, JERA



Reappointed Outside

Director\*1,3

**David Crane** Board Meetings Attended: 23/26 (88.5%)

Nov. 1984 White & Case LLP June 1991 Vice President, ABB Group Energy Ventures (Hong Kong)

June 1996 Senior Vice President, Lehman Brothers Mar. 2000 CEO and COO, International Power PLC

Dec. 2003 CEO, NRG Energy, Inc.

Apr. 2016 Senior Operating Executive, Pegasus Capital Advisors

Director (non-executive), JERA Sept. 2020 CEO, Climate Real Impact Solutions

Jan. 2021 Director (non-executive), Saudi Electricity Company

Oct. 2021 Director (non-executive), Tata Steel

Oct. 2021 Director (non-executive), Source Global Dec. 2021 Director (non-executive), Heliogen Inc.

Naylor Board Meetings Attended: 26/26 (100%)

Director\* Joseph M.

Reappointed Outside

Reappointed Outside

Board Meetings Attended:

Auditor Panel Meetings

Hideo Oishi

25/26 (96.2%)

20/20 (100%)

Attended:

Auditor\*2

Sept. 1982 Joined Chevron (California) July 2006 CEO/COO, Sasol Chevron (UK) General Manager - Business Development,

Projects at Chevron (California) Aug. 2013 Corporate Vice President - Strategic Planning, Chevron (California)

Apr. 2016 Corporate Vice President - Policy. Government and Public Affairs, Chevron (California)

Apr. 2021 Director (non-executive), JERA



Reappointed Outside

Director\*1 Mivuki Suzuki Board Meetings Attended: 25/26 (96.2%)

Mar. 2002 Executive Vice President and Head, Consumer Business, Japan Telecom Co. Ltd.

June 2004 CEO Asia Pacific, Lexis Nexis Jan. 2007 President and CEO, KVH Co. Ltd.

CEO and Representative Director, Jetstar Dec. 2011 Japan KK

May 2015 President and General Manager, Cisco Systems Japan Jan. 2018 President, Asia-Pacific, Japan and China, Cisco.

Systems (Singapore) Sep. 2019 Director (non-executive), MetLife Japan KK

Ltd. (current) Apr 2021 Director (non-executive), JERA

July 2021 Director (non-executive), Western Digital

Corporation (current)

Aug. 2022 Director (non-executive), Twilio Inc. (current)



Reappointed Outside

Director\* Satoru Katsuno Board Meetings Attended: 25/26 (96.2%)

Apr. 1977 Joined Chubu Electric Power Co., Inc. June 2013 Director Executive Vice President General Manager of Corporate Planning & Strategy Division, Chubu

June 2015 President and Director Chubu Apr. 2020 Chair of the Board of Directors, Chubu (current)

Apr. 2021 Director (non-executive), JERA



Reappointed Outside

Director\*1 Seiii Moriva Board Meetings Attended: 23/26 (88.5%)

Apr. 1986 Joined Tokyo Electric Power Co., Inc.

Apr. 2016 Managing Director, TEPCO Fuel & Power, Inc. Sept. 2018 Executive Vice President, CFO and Assistant to the President, TEPCO Holdings, Inc.: President at TEPCO Fuel & Power Inc.

Apr. 2019 Director (non-executive), JFRA Apr. 2022 Executive Vice President, Chief Risk Officer

(CRO), and Assistant to the President, TEPCO Holdings, Inc. (current)

### Auditors -



Apr. 1985 Joined Chubu Electric Power Co., Inc

Apr. 2018 Executive Officer, Chubu General Manager, Thermal Power Generation Business Department, Power Generation Company Apr. 2019 Corporate Auditor, JERA



Shigeyoshi Araki Board Meetings Attended: 26/26 (100%)

Auditor Panel Meetings Attended: 20/20 (100%)

June 2016 Executive Director, Research Institute of Capital Formation at Development Bank of Japan Inc.



Apr. 1985 Joined the Japan Development Bank (now the Development Bank of Japan Inc.)

June 2015 Member of the Board of Directors and Managing Executive Officer, the Development Bank of Japan Inc.

Apr. 2019 Corporate Auditor, JERA



Apr. 1985 Joined Tokyo Electric Power Co., Inc. Audit Special Officer

TEPCOHoldings, Inc. Apr. 2022 Corporate Auditor, JERA



Attended:

Auditor Panel Meetings

Board Meetings Attended

#### **Appointment of Directors**

Candidates for the Board of Directors are determined by the resolution of the board after consultation at the Nomination and Compensation Committee, taking into consideration each person's qualities and abilities necessary to serve as a JERA director in addition to the diversity and composition of the board. The Nomination and Compensation Committee comprises three or more directors, including two outside directors from JERA's shareholder companies. The Committee forms to discuss compensation and other personnel affairs relating to directors, corporate auditors, and executive officers.



## **Financial Data**

nit: Millions of yen			FY2019	FY2020	FY2021
rofit and Loss Statement	(P&L) Information	Net sales (operating revenue)	3,280,002	2,730,146	4,435,275
		Operating profit	167,008	249,438	132,992
		Ordinary profit	174,429	244,194	95,370
		Profit before income taxes	195,386	227,818	96,334
		Profit attributable to owners of parent	168,543	157,852	24,625
(P&L by segment)	Fuel business	Net sales	864,708	1,076,200	2,995,533
		Segment profit (loss)	25,094	48,014	161,337
	Overseas power generation business	Net sales	2,180	2,663	4,132
		Segment profit (loss)	36,126	(7,661)	(19,301)
	Thermal power and gas business in Japan	Net sales	2,926,760	2,391,044	3,119,438
		Segment profit (loss)	135,814	152,858	(113,891)
	Adjusted	Net sales	(513,647)	(739,762)	(1,683,829)
		Segment profit (loss)	(28,492)	(35,358)	(3,518)
		Depreciation and amortization	197,940	187,737	153,619
		Increase in property, plant and equipment, and intangible assets	244,541	225,997	336,981
		Research and development costs	1,433	1,142	1,079
		Thermal power and gas business in Japan	177	132	106
		Other	1,255	1,009	973
alance Sheet Information		Total assets	4,035,324	4,090,880	8,722,197
		Total net assets	1,601,267	1,762,120	1,974,370
		Net worth	1,540,522	1,686,194	1,809,691
		Interest-bearing liabilities	1,505,957	1,613,291	2,646,549
sh Flow Information		Net cash provided by (used in) operating activities	551,670	340,825	(340,433)
		Net cash used in investing activities	(310,863)	(272,092)	(661,033)
		Net cash provided by financing activities	(452,054)	89,542	871,775
		Free cash flow	240,807	68,733	(1,001,466)
		Cash and cash equivalents at the end of the year	402,431	561,685	461,456
y Financial Indicators		Net profit*1	90,082	111,629	277,032
		EBITDA*2	292,812	359,305	610,848
		Return on invested capital (ROIC) (%)*3	3.2	3.7	7.3
		Return on equity (ROE) (%)*4	8.5	6.9	15.8
		Net debt-to-equity ratio*5	0.7	0.6	1.2
		Net debt-to-EBITDA ratio*6	3.6	2.8	3.5
ther		Synergy effects (billions of yen)	25.0	45.0	85.0

#### Notes:

<sup>(1).</sup> Excluding time lag (2). EBITDA = Earnings before interest and taxes\* + Depreciation and amortization + Interest expenses \*Excluding time lag

<sup>(3).</sup> ROIC = (Net profit\*1 + Interest expense × (1 - Effective tax rate\*2)) ÷ (Interest-bearing liabilities + Net worth\*3)\*4 \*1. Excluding time lag \*2. Using the company's effective tax rate (figures listed in the Financial Statement) \*3. Total net assets - Non-controlling interests \*4. Average at the beginning and end of the period (4). ROE = Net profit\*1 ÷ Net worth\*2 \*1. Excluding time lag \*2. Average at the beginning and end of the period

<sup>(5).</sup> Net debt-to-equity ratio = (Interest-bearing liabilities - Cash and deposits) ÷ Net worth\* \*Total net assets - Non-controlling interests (6). Net Debt / EBITDA = (Interest-bearing liabilities - Cash and deposits) ÷ EBITDA\* \*Excluding time lag

## **Financial Data**

#### **Breakdown of Major Corporate Bonds**

	FY2019	FY2020		FY2021				
Bonds payable Total outstanding amount (millions of yen)	_	40,	000		150	,000		
Description	None	Unsecured bonds – 1st (with inter-bond pari passu clause)	Unsecured bonds – 2nd (with inter-bond pari passu clause)	Unsecured bonds – 3rd (with inter-bond pari passu clause)	Unsecured bonds – 4th (with inter-bond pari passu clause)	Unsecured bonds – 5th (with inter-bond pari passu clause)	Unsecured bonds – 6th (with inter-bond pari passu clause)	
Туре	None	Domestic straight bonds (unsecured)						
Date of issue	None	October 22, 2020	October 22, 2020	November 26, 2021	November 26, 2021	January 19, 2022	January 19, 2022	
Issue amount (millions of yen)	None	20,000	20,000	40,000	30,000	30,000	10,000	
Time to maturity	None	5 years	10 years	5 years	10 years	3 years	19 years	
Interest rate (%)	None	0.190	0.390	0.150	0.350	0.050	0.670	

#### **Power Sold / Power Generated**

		FY2019	FY2020	FY2021
Power sold (billion kWh)		265.7	246.6	255.5
Power generated (billion kWh)	LNG	215.6	201.5	192.3
	Coal	48.4	43.2	55.0
	Fuel oil / Crude oil	1.3	0	0
	Total	265.3	244.6	247.3

### **Major Facility Plans (Thermal Power)**

As of March 31, 2022

Company	Segment	Location	Output (MW)	Start of construction	Start of operation
JERA Power TAKETOYO LLC	Thermal power and gas business in Japan	Taketoyo Unit 5	1,070	April 2018	August 2022
JERA Power ANEGASAKI LLC	Thermal power and gas business in Japan	Anegasaki New Units 1, 2, 3	646.9 × 3	February 2020	February / April / August 2023
JERA Power YOKOSUKA LLC	Thermal power and gas business in Japan	Yokosuka Units 1, 2	650 × 2	August 2019	June 2023, February 2024
Goi United Generation LLC	Thermal power and gas business in Japan	Goi Units 1, 2, 3	780 × 3	April 2021	August / November 2024, March 2025

## **Non-Financial Data**

#### **Environmental Data**

Item*1	Unit	FY2019	FY2020	FY2021
Fuel consumption				
Coal*2	million t	17.13	15.77	20.04
Petroleum*2	million kl	0.34	0.05	0.04
LNG, LPG, natural gas*2	million t	30.93	28.86	27.43
Biomass	million t	0.39	0.39	0.38
Sending-end power	billion kWh	265.3	244.6	247.3
Gas sales volume	million t	3.06	3.12	3.82
Total energy consumption (crude oil equivalent)	million kl	55.25	50.70	50.80
Total thermal power generation efficiency (low heating value)	%	50.1	49.7	48.2
Thermal Power Generation Efficiency Benchmark A (Energy Conservation Act)*3	_	1.002	1.000	1.003
Thermal Power Generation Efficiency Benchmark B (Energy Conservation Act)* $^{\rm *3}$	%	46.8	46.8	46.7
Purchased electricity*2	million kWh	174.68	161.74	84.75
Industrial water intake	thousand m <sup>3</sup>	18,116	17,712	18,165
Tap water intake	thousand m <sup>3</sup>	868	809	864
Groundwater usage	thousand m <sup>3</sup>	22	176	118
Greenhouse gas (GHG) emissions associated with power generation business (Scope 1)	thousand t-CO <sub>2</sub>	124,629	114,952	121,098
CO <sub>2</sub> emissions	thousand t-CO2	124,501	114,833	120,948
CH <sub>4</sub> (methane) emissions	thousand t-CO2	14	11	11
N <sub>2</sub> O (nitrous oxide) emissions	thousand t-CO2	109	101	119
SF₀ (sulfur hexafluoride) emissions*4	thousand t-CO2	4	6	19
HFC (CFC alternative) emissions*4	thousand t-CO2	0.6	0.4	0.3
[Domestic / JERA Group] $CO_2$ emissions associated with power generation business (Scope 1)*5	thousand t-CO <sub>2</sub>	139,007	127,436	131,756
[Global / JERA Group] CO <sub>2</sub> emissions associated with power generation business (Scope 1)*5,*6	thousand t-CO <sub>2</sub>	161,111	147,915	155,358
CO <sub>2</sub> emissions associated with fuel upstream business (Scope 1)*5,*6	thousand t-CO <sub>2</sub>	235	348	245
$CO_2$ emissions associated with fuel transportation business (Scope 1) $^{*5,*6}$	thousand t-CO <sub>2</sub>	297	327	283
CO <sub>2</sub> emissions associated with purchased electricity consumption (Scope 2)*2	thousand t-CO <sub>2</sub>	79	77	37
Other indirect CO <sub>2</sub> emissions (Scope 3)	thousand t-CO2	31,993	30,413	32,508
Purchased goods and services	thousand t-CO2	0.07	0.04	0.01
Capital goods	thousand t-CO2	768	708	902
Fuel- and energy-related activities*2	thousand t-CO2	22,777	21,083	21,034
Upstream transportation and distribution*2	thousand t-CO2	25	21	28
Waste generated in operations	thousand t-CO2	165	171	219
Business travel	thousand t-CO2	1	1	1
Employee commuting	thousand t-CO2	1	1	2
Upstream leased assets	thousand t-CO2	_	_	_
Downstream transportation and distribution	thousand t-CO2	_	_	_
Processing of sold products	thousand t-CO2	_	_	_
Use of sold products*2	thousand t-CO2	8,255	8,428	10,323
End-of-life treatment of sold products	thousand t-CO2	_	_	_
Downstream leased assets	thousand t-CO2	_	_	_
Franchises	thousand t-CO2	_	_	_
Investments	thousand t-CO2	_	_	_

T. WA		= 10000	= 1000	
Item*1	Unit	FY2019	FY2020	FY2021
CO <sub>2</sub> emissions intensity of power generation*7	kg-CO <sub>2</sub> /kWh	0.469	0.469	0.489
[Domestic / JERA Group] CO <sub>2</sub> emissions intensity of power generation business*5,*7	kg-CO <sub>2</sub> /kWh	0.492	0.491	0.505
[Global / JERA Group] CO <sub>2</sub> emissions intensity of power generation business*5,*6,*7	kg-CO <sub>2</sub> /kWh	0.496	0.493	0.512
SF <sub>6</sub> (sulfur hexafluoride) recovery rate (at time of inspection)	%	99.8	99.9	99.5
SF <sub>6</sub> (sulfur hexafluoride) capture rate (at time of disposal)	%	100.0	99.4	99.0
SOx (sulfur oxides) emissions	thousand t	7.50	5.09	6.32
SOx (sulfur oxides) emissions intensity*7	g/kWh	0.03	0.02	0.03
NOx (nitrogen oxides) emissions	thousand t	21.13	17.83	17.68
NOx (nitrogen oxides) emission intensity*7	g/kWh	0.08	0.07	0.07
Gross wastewater volume	thousand m <sup>3</sup>	7,604	7,506	7,188
COD (chemical oxygen demand) emissions	t	21	20	20
Industrial wastes and byproducts	thousand t	1,991	2,045	2,715
Disposal by reclamation	thousand t	12	13	19
Coal ash utilization rate	%	99.99	99.99	99.99
Severe leaks	cases	0	0	0
PCB (polychlorinated biphenyl) transformers and capacitors disposed of	units	16	57	78
PCB-contaminated insulating oil treated	kl	86	510	25
Fines or sanctions for violations of environmental laws and regulations	cases	0	0	0

<sup>\*1.</sup> Figures for JERA in Japan and joint ventures with Hitachinaka Generation Co., Inc., and JERA Power TAKETOYO LLC only (unless otherwise noted)

#### **Social Data**

Item	Unit	FY2019	FY2020	FY2021
Employees (JERA Group)	People	4,797	4,907	5,062
Employees (JERA only)*1				
Total	People	3,726	3,847	3,910
Men	People	3,452	3,557	3,581
Women	People	274	290	329
Average age (JERA only)				
Total	Years old	44.3	44.7	44.6
Men	Years old	44.5	44.8	44.9
Women	Years old	41.8	42.2	41.6
Managers (JERA only)				
Total	People	722	756	716
Men	People	697	724	680
Women	People	25	32	36

<sup>\*2.</sup> Figures for FY2020 and previous years have been revised following a review of definitions and calculation methods

<sup>\*3.</sup> Figures for JERA operations in Japan

<sup>\*4.</sup> Calendar year totals

<sup>\*5.</sup> Joint venture figures calculated based on JERA equity stake

<sup>\*6.</sup> Totals for overseas businesses are generally aggregated based on local fiscal years and reporting standards

<sup>\*7.</sup> Figures based on sending-end power

Value Creation

### **Non-Financial Data**

Item	Unit	FY2019	FY2020	FY2021
New graduate hires (JERA only)*2				
Total	People	50	51	79
Men	People	43	43	68
Women	People	7	8	11
Mid-career hires (JERA only)				
Total	People	21	72	131
Men	People	16	60	98
Women	People	5	12	33
Turnover rate (JERA only)*3				
Total	%	_	_	2.8
Men	%	_	_	2.9
Women	%	_	_	1.9
Employees using childcare leave (JERA only)				
Total	People	5	10	20
Men	People	0	0	10
Women	People	5	10	10
Return-to-work rate after childcare leave (JERA only)*4				
Total	%	100	100	100
Men	%	_	_	100
Women	%	100	100	100
Gender wage gap (the ratio between men and women where a gap exists)*5	%	_	_	_
Employee engagement*6	%	68.1	68.6	68.8
Labor union membership rate	%	100	100	100
Average annual training hours per employee*7	Hours			32.4
Contribution amounts	Millions of yen	4	780	38

- \*1. Excluding employees on loan from JERA to other companies and including employees on loan to JERA from other companies
- \*2. Figures from FY2021 and earlier represent the number of employees initially assigned to JERA from TEPCO and Chubu. (New graduate hiring began in FY2022.)
- \*3. Figures include individuals who have an employment relationship with JERA, including employees on loan.
- \*4. Percentage of employees who returned to work during the fiscal year among all scheduled to return
- \*5. In April 2021, JERA introduced its own compensation system in which there is no wage gap between men and women employees who share the same attributes (age, position, rank, etc.).
- \*6. An average of 58.8% among all businesses subject to a third-party survey
- \*7. In FY2021, JERA established its own training system that includes off-the-job group training as well as on-the-job technical training at power plants, e-learning, etc.

#### **Governance Data**

Item (Method of Calculation)	Unit	FY2019	FY2020	FY2021
Customer privacy complaints, etc.	cases	0	0	0
Compliance violations	cases	0	0	0
Reports via the harassment consultation hotline	cases	_	_	12
Reports via the whistleblower hotline*1	cases	12	12	17
Data leaks	cases	0	0	0

Item (Method of Calculation)	Unit	FY2019	FY2020	FY2021
Composition of the Board of Directors				
Number of directors	People	10	10	10
Number of outside directors	People	4	5	5
Ratio of outside directors (number of outside directors ÷ number of directors)	%	40	50	50
Number of female directors	People	0	0	1
Ratio of female directors (number of female directors $\div$ number of directors)	%	0	0	10
Number of executive officers (excluding those who are also directors)	People	11	12	10
Number of female executive officers	People	0	0	0
Ratio of female executive officers (number of female executive officers ÷ number of executive officers)	%	0	0	0
Average age of directors	Years old	60.4	60.1	61.3
Director age	Years old	No age limit	No age limit	No age limit
Age of youngest director	Years old	49	50	57
Age of eldest director	Years old	69	68	69
Term of office for directors	Years	1	1	1
Term of office for executive officers	Years	1	1	1
Number of board meetings	Meetings	15	23	26
Attendance ratio of meetings ([number of board meetings attended by directors × number of directors] ÷ [number of board meetings held × number of directors])	%	97.3	99.1	96.5
Attendance ratio of outside directors (Inumber of board meetings attended by outside directors $\times$ number of outside directors] $\dot{=}$ [number of board meetings held $\times$ number of outside directors])	%	93.3	99.1	93.8
Director compensation				
Directors paid	People	8	8	8
Total amount of compensation	Millions of yen	334	278	312
Corporate auditors	People	3	3	3
Outside corporate auditors	People	3	3	3
Ratio of outside corporate auditors (number of outside corporate auditors ÷ number of corporate auditors)	%	100	100	100
Number of statutory auditor panel meetings	Meetings	20	17	20
Statutory auditor panel meeting attendance rate ([number of meetings attended by auditors × number of auditors] ÷ [number of meetings held × number of auditors])	%	100	100	100
Board of Directors meeting attendance rate by corporate auditors ([number of meetings attended by auditors $\times$ number of auditors] $\div$ [number of board meetings held $\times$ number of auditors])	%	100	100	98.7
Nomination and Compensation Committee members	People	5	5	4
Outside directors	People	2	2	2
Ratio of outside directors	%	40	40	50
Committee meetings	Meetings	6	7	9
Committee meeting attendance rate	%	100	100	100
Sustainability Promotion Committee members*2	People	10	10	10
Committee meetings	Meetings	1	2	2

- \*1. Two FY2021 cases overlapped between the whistleblower and harassment consultation hotlines and are included in current figures.
- \*2. Member count includes officers.

## **Thermal Power Plants in Japan**

(As of March 31, 2022)

#### List of Thermal Power Plants\*1 (total output and fuel type listed for each station)

Joetsu	2.38GW / 🔷
Hirono	4.4GW / ◆ ◆ ◆
Hitachinaka	2GW / ◆
Hitachinaka Joint Thermal Power Station (Hitachinaka Generation Co., Inc.)	0.65GW / ◆
Kashima	5.66GW / ◆ ◆ ◆
Chiba	4.38GW / 🔷
Goi (Goi United Generation LLC) *Scheduled to begin operation in FY2024	2.34GW / ◆
Anegasaki	1.2GW / 🔷
Anegasaki (JERA Power Anegasaki) *Scheduled to begin operation in FY2023	1.941GW / ◆
Sodegaura	3.6GW / 🔷
Futtsu	5.16GW / 🔷
Yokosuka (JERA Power Yokosuka) *Scheduled to begin operation in FY2023	1.3GW / ◆
Minami-Yokohama	1.15GW / 🔷
Yokohama	3.016GW / 🔷
Higashi-Ohgishima	2GW / 🔷
Kawasaki	3.42GW / ◆
Shinagawa	1.14GW / 🔷
Atsumi	1.4GW / ◆ ◆
Hekinan	4.1GW / ◆
Taketoyo (JERA Power Taketoyo)*2	1.07GW / ◆
Chita	1.708GW / 🔷
Chita Daini	1.708GW / 🔷
Shin-Nagoya	3.058GW / 🔷
Nishi-Nagoya	2.376GW / 🔷
Kawagoe	4.802GW / 🔷
Yokkaichi	0.585GW / 🔷

<sup>\*1.</sup> Power plant name followed by name of operating company in parentheses.

## **Overseas Businesses & LNG Suppliers**

(As of March 31, 2022)

#### **Overseas Businesses**

■Thermal power generation ■ Renewable energy ■ Fuel upstream ■ Opt	timization	
Netherlands	Philippines	
Rietlanden Coal Terminal	<ul> <li>TeaM Energy IPP Project</li> </ul>	
UK	Aboitiz Power IPP Project	
Gunfleet Sands Offshore Wind IPP Project	Indonesia	
• Zenobe Battery Storage	<ul> <li>Cirebon Coal Thermal IPP Project</li> </ul>	
• JERA Global Markets	US	
Qatar	<ul> <li>Phu My Gas Thermal IPP Project</li> </ul>	
Ras Laffan B Gas Thermal IWPP Project	<ul> <li>Carroll County Gas Thermal IPP Project</li> </ul>	
• Ras Laffan C Gas Thermal IWPP Project	<ul> <li>Cricket Valley Gas Thermal IPP Project</li> </ul>	
Mesaieed Gas Thermal IPP Project	<ul> <li>Linden Gas Thermal IPP Project</li> </ul>	
Umm Al Houl Gas Thermal IWPP Project	<ul> <li>Compass Gas Thermal IPP Project</li> </ul>	
UAE	<ul> <li>El Sauz Wind Power Project</li> </ul>	
Umm Al Nar Gas Thermal IWPP Project	<ul> <li>Freeport LNG Project</li> </ul>	
Oman	<ul> <li>JERA Global Markets</li> </ul>	
Sur Gas Thermal IPP Project	Vietnam	
India	<ul> <li>Phu My Gas Thermal IPP Project</li> </ul>	
ReNew Power Wind and Solar Power IPP Project	Singapore	
Bangladesh	<ul> <li>JERA Global Markets</li> </ul>	
Summit Power IPP Project	Australia*	
Meghnaghat Gas Thermal IPP Project	<ul> <li>Darwin LNG Project</li> </ul>	
Thailand	<ul> <li>Gorgon LNG Project</li> </ul>	
• EGCO IPP Project	<ul> <li>Wheatstone LNG Project</li> </ul>	
Solar Power IPP Project	<ul> <li>Ichthys LNG Project</li> </ul>	
Ratchaburi Gas Thermal IPP Project	Mexico	
• Wind Power IPP Project	<ul> <li>Valladolid Gas Thermal IPP Project</li> </ul>	
AT Biopower Rice Husk Biomass Thermal IPP Project	<ul> <li>Falcon Gas Thermal IPP Project</li> </ul>	
Taiwan	IPP: Independent Power Producer	
Chang Bin / Fong Der / Star Buck Gas Thermal IPP      Desired	IWPP: Independent Water and Power Producer SPP: Small Power Producer	
Project  Formace 1 Offshare Wind Power IDD Project	* Joined Barossa Gas Project April 2022	
Formosa 1 Offshore Wind Power IPP Project     Formosa 2 Offshore Wind Power IPP Project		
Formosa 2 Offshore Wind Power IPP Project	_	

#### **Major LNG Suppliers**

• US	Australia	• Indonesia	<ul> <li>Malaysia</li> </ul>	Brunei	
Papua New Guinea	• Qatar	• UAE	Russia		

<sup>\*2.</sup> Began operation in August 2022

Strategies

# **List of Group Companies**

#### Consolidated Subsidiaries (As of March 31, 2022)

Name	Location	Main Business Activities
JERA Power International B.V.*	Amsterdam, Netherlands	Investment and financing, securities, etc., for overseas power generation projects
JERA Asia Pte. Ltd.	Singapore	Development of electricity- and gas-related projects in Asia
JERA Australia Pty. Ltd.*	Perth, Australia	Fuel business management in Australia
JERA Global Markets Pte. Ltd.*	Singapore	Fuel trading and related activities
Tokyo Timor Sea Resources Pty. Ltd*	Perth, Australia	Investment in gas field development projects i the Joint Petroleum Development Area between Australia and Timor-Leste
Hitachinaka Generation Co., Inc.*	Tokai-mura, Naka-gun, Ibaraki	Thermal power generation and related activities
LNG Marine Transport Co., Ltd.	Chiyoda City, Tokyo	Liquefied natural gas marine transport and related agency activities
JERA Global Insurance Inc.	Hawaii, USA	Insurance
JERA Power YOKOSUKA LLC	Yokosuka City, Kanagawa	Thermal power generation and related activities
JERA Power ANEGASAKI LLC	Ichihara City, Chiba	Thermal power generation and related activities
Chita LNG Co., Ltd.	Chita City, Aichi	Services related to the receiving, storage, regasification, and delivery of liquefied natural gas
Goi United Generation LLC	Ichihara City, Chiba	Thermal power generation and related activities
JERA Power (Thailand) Co., Ltd.	Bangkok, Thailand	Power plant operation and engineering service and financing for these services in Thailand
Nexeraise Co., Ltd.	Koto City, Tokyo	Petroleum product sales, operation and management of thermal power facilities, power plant disaster prevention and response operations, etc.
JERA Power TAKETOYO LLC	Taketoyo-cho, Chita-gun, Aichi	Thermal power generation and related activities
JERA Americas Inc.	Delaware, USA	Management of power generation and activities, including investing, financing, securities, etc., in the Americas
JERA Americas Holdings Inc.	Delaware, USA	Management of power generation and fuel activities in the Americas

63 other companies

The five companies marked with an asterisk (\*) fall under the category of specified subsidiaries.

Note that of the "63 other companies" not listed above, 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, JERA Global Markets UK Ltd.

### **Equity Method Affiliates**

Name	Location	Main Business Activities
Soma Kyodo Power Company, Ltd.	Soma City, Fukushima	Thermal power plant operations and maintenance, electric power sales
Joban Joint Power Co., Ltd.	Chiyoda City, Tokyo	Thermal power plant operations and maintenance, electric power sales
Aboitiz Power Corporation	Manila, Philippines	Power generation and distribution, retail electric power sales in the Philippines
Kashima Kyodo Thermal Electric Power Co., Inc.	Kashima City, Ibaraki	Thermal power plant operations and maintenance, electric power sales
Kimitsu Cooperative Thermal Power Company, Inc	Kimitsu City, Chiba	Thermal power plant operations and maintenance, electric power sales
TeaM Energy Corporation	Manila, Philippines	Power generation in the Philippines
Freeport LNG Development, L.P.	Delaware, USA	LNG facilities operations and maintenance development in the Americas

34 other companies



## **Organizational Chart**





## **Corporate Overview**

Corporate Name	JERA Co., Inc.
Locations	[Headquarters] Nihonbashi Takashimaya Mitsui Building 25th Floor, 2-5-1 Nihonbashi, Chuo-ku, Tokyo 103-6125, Japan TEL: +81-3-3272-4631 (Main) FAX: +81-3-3272-4635  [East Japan Branch] Hibiya Kokusai Building 9th Floor, 2-2-3 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0011, Japan TEL: +81-3-3272-4631 FAX: +81-3-6363-5781  [West Japan Branch] JP TOWER NAGOYA 18th Floor, 1-1-1 Meieki, Nakamura-ku, Nagoya-shi, Aichi 450-6318, Japan TEL: +81-52-740-6842 FAX: +81-52-740-6841
Incorporated	April 30, 2015
Capital	100 billion yen
Shareholding Ratio	TEPCO Fuel & Power, Inc.: 50% Chubu Electric Power Co., Inc.: 50%
Description of Business	<ul> <li>Thermal power generation</li> <li>Renewable energy</li> <li>Gas and LNG</li> <li>Engineering, consulting, and other activities related to the above businesses</li> </ul>
Number of Employees	5,062 (As of March 31, 2022)













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The future belongs to the challengers, the ones who dare to dream in the face of adversity. Athletes challenge the limits of possibility and inspire us to do the same.

At JERA, we dare to dream.

As Japan's largest power company, we are committed to having a global impact across a range of businesses. We believe in meeting the challenge of net-zero carbon head on. "JERA Zero CO2 Emissions 2050" is our game plan for a brighter future.

One run can change the course of the game. And JERA is stepping up to the plate with the scale, skills, ideas, and innovations needed to hit the ball out of the park. Energy and baseball. Together, we can drive sports and culture forward into a new era.

JERA is a proud partner of the Central League.

J619 A.17-12.

We identify with Nippon Professional Baseball's mission to promote sports in Japan through baseball and thereby contribute to domestic welfare and international goodwill.



## JERA Co., Inc.

Nihonbashi Takashimaya Mitsui Building 25th Floor 2-5-1 Nihonbashi, Chuo-ku, Tokyo 103-6125, Japan Energy for a New Era TEL: +81-3-3272-4631 FAX: +81-3-3272-4635 www.jera.co.jp