



## SECOND PARTY OPINION

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### JERA CO., INC. TRANSITION BOND PERIODIC REVIEW #3

Prepared by: DNV Business Assurance Japan K.K.

Location: Kobe, Japan

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#### Publication History

Date of Issue	Remarks
12 May 2022	Transition Bond Framework & Transition Bond Second Party Opinion_Rev1.0
23 May 2023	Transition Bond Periodic Review (#1) (JERA's 8th Unsecured Bond and JERA's 9th Unsecured Bond)
23 May 2024	Transition Bond Periodic Review (#2) (JERA's 8th Unsecured Bond and JERA's 9th Unsecured Bond)
23 May 2025	Transition Bond Periodic Review (#3) (JERA's 8th Unsecured Bond and JERA's 9th Unsecured Bond)



## Scope and Objectives

JERA Co., Inc. (hereinafter "JERA" \*including the JERA Group) has engaged DNV Business Assurance Japan (hereinafter "DNV") to conduct a periodic review of the JERA Transition Bonds (JERA 8th Unsecured Bond and JERA 9th Unsecured Bond, hereinafter "the Bonds"). The purposes of the periodic review at DNV are to ensure that the Bonds comply with the following standards including Climate Transition Finance Handbook 2020 (hereinafter "CTFH"), and the Basic Guidelines on Climate Transition Finance (Financial Services Agency "FSA," Ministry of Economy, Trade and Industry "METI" and Ministry of the Environment "MOE" 2021, hereinafter "CTFBG"), and in addition, as the Bonds meeting the four elements of transition and specifying the use of the proceeds, the Green Bond Principles 2021 (hereinafter "GBP"), and Green Bond Guidelines (MOE 2020, hereinafter "GBGL"); and to provide an independent second party opinion on the eligibility of the Bonds.

JERA issued the Bonds on 24 May 2022. The amount of the Bonds is JPY 20 billion (8th: JPY 12 billion, 9th: JPY 8 billion). DNV's review team has conducted the first periodic review for the period May 2022 to April 2023 and the second periodic review for the period May 2023 to April 2024, based on the CTFH and CTFBG, GBP and GBGL. This time, DNV conducted the third periodic review for the period May 2024 to April 2025.

This report provided a periodic review of the requirements of the transition bonds with the specific use of proceeds (elements -1 to -4, as described below).

DNV, as an independent external reviewer, has identified no real or perceived conflict of interest associated with the delivery of this second-party opinion for JERA.

In this report, no assurance is provided regarding the financial performance of the Bonds, the value of any investments in the Bonds, or the long-term environmental benefits of the transaction.

## Standards/Guidelines to be applied

No.	Standards or guidelines	Scheme owner	Application level
1.	Climate Transition Finance Handbook (CTFH) <sup>*1</sup>	International Capital Market Association (ICMA), 2020	Applied
2.	Basic Guidelines on Climate Transition Finance (CTFBG) <sup>*1</sup>	Financial Services Agency, Ministry of Economy, Trade and Industry, Ministry of the Environment, 2021	Applied
3.	Green Bond Principles (GBP) <sup>*2</sup>	International Capital Market Association (ICMA), 2021	Applied
4.	Green Bond Guidelines (GBGL) <sup>*2</sup>	Ministry of the Environment, 2020	Applied

\*1 Climate transition: The concept of climate transition focuses principally on the credibility of an issuer's climate change-related commitments and practices. (Quoted from CTFH and CTFBG)

\*2 It confirms compliance with the four core elements (use of proceeds, process for project evaluation and selection, management of proceeds, and reporting) that must be met when issuing as a bond that meets the four elements of transition and has a specific use of proceeds (quoted and edited from CTFBG).



## **Responsibilities of JERA and DNV**

JERA has provided the information and data used by DNV during the delivery of this review.

DNV's statement represents an independent opinion and is intended to inform JERA and other interested stakeholders in the Bonds as to whether the established criteria have been met, based on the information provided.

In its review, DNV has relied on the information and the facts presented to us by JERA. DNV is not responsible for any aspect of the selected transition project assets referred to by this opinion statement.

Therefore, DNV shall not be held liable if any of the information or data provided by JERA and used as a basis for this assessment were not correct or complete.

## Basis of DNV's Opinion

To provide as much flexibility for the issuer, JERA, as possible, we have adapted our transition bond assessment methodologies, which incorporate the requirements of the CTFH, CTFBG, GBP and GBGL to create a JERA Transition Bond Eligibility Assessment Protocol (hereinafter "Protocol"). The Protocol is applicable to CTFH, CTFBG, GBP and GBGL based transition bonds.

Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle and guidelines behind the criteria are that that transition bonds should "provide the investment opportunities necessary for climate transition finance to be carried out transparently and credibly."

In accordance with DNV's protocol, the criteria for this transition bond being reviewed are grouped into the following four elements.

- **Principle One: Use of Proceeds**

The Use of Proceeds are guided by the requirement that a fundraiser of transition finance (with specific use of proceeds) must use funds raised to finance eligible activities. The eligible activities should produce clear environmental benefits.

- **Principle Two: Process for Project Evaluation and Selection**

Evaluation and Selection criteria are guided by the requirement that a fundraiser of a transition finance (with specific use of proceeds) should outline the process it follows when determining eligibility of an investment using transition finance proceeds and outline any impact objectives it will consider.

- **Principle Three: Management of Proceeds**

The Management of Proceeds criteria are guided by the requirement that a transition finance (with specific use of proceeds) should be tracked within the fundraiser organization, and separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled should be made.

- **Principle Four: Reporting**

The Reporting criteria are guided by the recommendation that Sustainability Reporting to the bond investors should be made of the use of bond proceeds and that quantitative and/or qualitative performance indicators should be used, where feasible.

## Work Undertaken

Our work constituted a comprehensive review of the available information, based on the understanding that this information was provided to us by the issuer in good faith. We have not performed an audit or other tests to check the veracity of the information provided to us. The work undertaken to form our opinion included:

### **Initial (transition bond pre-issuance) assessment** \*Not included in this report

- Creation of the issuer-specific Protocol for application to finance.
- Assessment of documented evidence provided by the issuer on the Bonds and supplemented assessment by a high-level desktop research. These checks refer to current assessment best practices and standards methodology.
- Discussions with the issuer, and review of relevant documentation.
- Documentation of findings against each element of the criteria.

### **Periodic (annual) review** \*Contents of this report

- Review of evidence documentation provided by the issuer in relation to transition bond execution, supplemented by high-level desktop research, document review and interviews with key personnel. These checks refer to current best practices of evaluation and standard methodologies.
- Discussion with issuer management and review of relevant document controls.
- Field research and inspections (if required).
- Review of covered projects and assets at the time of periodic review.
- Documentation of periodic review observations, as detailed in this document.

The DNV's opinion statement (see below for details) summarises these.

## Findings and DNV's Opinion

### ●Principle One: Use of Proceeds

DNV confirmed that, as of the end of March 2025, the funds raised by JERA (JPY 20 billion) had been fully allocated to the following projects.

#### 1. Ammonia substitution demonstration - JPY 8.4 billion allocated

Regarding Project ① Demonstration study of 20% ammonia co-firing in a 1 million kW class coal-fired power plant<sup>\*1</sup> (Photo-1, 2), DNV confirmed that JERA conducted first receipt of fuel ammonia in February 2024, and after equipment commissioning, began demonstration test of 20% ammonia substitution at the demonstration unit (Hekinan Thermal Power Station Unit 4) in April 2024, and completed in June 2024.

Regarding Project ② Demonstration project to establish the higher-ratio ammonia co-firing technology in the commercial coal-fired power plant<sup>\*2</sup>, DNV confirmed that the development of a high ammonia substitution burner used in the combustion test furnace has been completed, based on information provided by JERA.

\*1 This project developed and tested the technology to convert 20% of the fuel (calorific value ratio) to ammonia on a commercial scale at Hekinan Thermal Power Station Unit 4 (to FY2024). In this test, DNV confirmed that JERA achieved a 20% conversion of ammonia at a rated output of 1 million kW, and that nitrogen oxides (NOx) were equivalent to or lower than before ammonia substitution (coal single-fuel combustion), while sulfur oxides (SOx) were reduced by approximately 20%. Additionally, N<sub>2</sub>O with strong greenhouse effect was not detected above the detection limit. DNV also confirmed that the operational performance was equivalent to before ammonia substitution (coal single-fuel combustion). Based on these results, JERA commenced the construction for commercial operation in July 2024 in the premises of the above-mentioned power station.

JERA website: [https://www.jera.co.jp/en/news/notice/20240626\\_1954](https://www.jera.co.jp/en/news/notice/20240626_1954)

\*2 This project is to develop a new high ammonia substitution burner and study the specifications of the equipment (to FY2024) and aims to carry out demonstration tests to convert more than 50% of the fuel (calorific value ratio) to ammonia at the Hekinan Thermal Power Station (to FY2030).

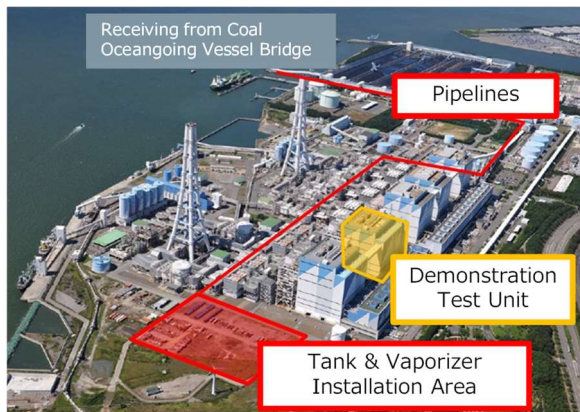


Photo-1: Project 1 JERA Hekinan Thermal Power Station Unit 4



Photo-2: Project 1 Construction progress of ammonia tank area  
(As of March 2024)

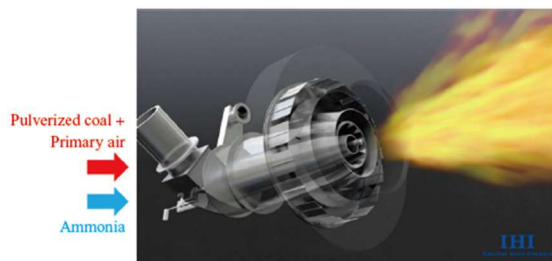


Figure-1: Schematic of the ammonia combustion burner

## 2. Hydrogen substitution demonstration - JPY 0.1 billion allocated

Project 4) Technical verification of hydrogen co-firing power generation for the construction of a large-scale hydrogen supply chain is the first initiative in Japan to utilise large volumes of hydrogen<sup>\*3</sup> as fuel in a large-scale commercial LNG-fired power station, and the first priority is to demonstrate hydrogen power generation technology on a commercial scale.

In this project, JERA conducted feasibility studies (hereinafter “FS”) in FY2022 and FY2024. In the FY2022 FS, JERA identified issues regarding the potential impact of trace substances (benzene, toluene, etc.) contained in by-product hydrogen on gas turbines, which are the main equipment of power generation facility, and is conducting hydrogen property assessment<sup>\*4</sup> in a separate project<sup>\*5</sup> to resolve these issues. Then, through the FS in the FY 2024, no new technological development elements that require demonstration from FY2028 have been identified. Furthermore, considering that multiple hydrogen substitution demonstration tests using large gas turbines for power generation



are being conducted domestically and internationally, and that the knowledge gained from these tests can be effectively utilized, JERA has not reached the decision to proceed with the technical demonstration for this project regarding the “decision on whether to commence plant EPC and verification” set as the stage gate target for FY2024 in this Green Innovation Fund Project, and therefore DNV confirmed that JERA decided to terminate this project.

DNV confirmed that the hydrogen property assessment<sup>\*4</sup>, which is being conducted as a separate project<sup>\*5</sup>, is progressing as planned.

DNV also confirmed that the termination of this technical demonstration will not have a significant impact on the transition plan (commercial introduction of hydrogen power generation in the 2030s) outlined in the “JERA Zero CO<sub>2</sub> Emissions 2050 Roadmap for its Business in Japan.”

\*3 One of the options in this demonstration is the potential utilization of by-product hydrogen from the processing of crude oil. Low-carbonization and decarbonization will also be considered in the future including hydrogen suppliers.

\*4 In the assessment, JERA researched on the impact of trace substances contained in fuel hydrogen on gas turbines when by-product hydrogen and methylcyclohexane (hereinafter "MCH") are used as hydrogen storage and transport medium for hydrogen in future hydrogen storage and supply.

\*5 NEDO consignment project “Research and development on hydrogen quality related to building a large-scale hydrogen supply chain”

[https://www.nedo.go.jp/koubo/SE3\\_100001\\_00040.html](https://www.nedo.go.jp/koubo/SE3_100001_00040.html)

### **3. Decommissions of existing inefficient thermal power generation facilities (Demolition of Goi Thermal Power Station) - JPY 10.6 billion allocated**

Regarding Project ⑤ Demolition of Goi Thermal Power Station, DNV confirmed in the Transition Bond Periodic Review (#2) that JERA completed the demolition work in March 2024.

Goi Thermal Power Station Unit 1 began commercial operation in August 2024, Unit 2 in November 2024, and Unit 3 in March 2025, completing the replacement work with a gas turbine combined cycle (GTCC) system fueled by LNG (Photo-3).

JERA website: [https://www.jera.co.jp/en/news/information/20240801\\_1979](https://www.jera.co.jp/en/news/information/20240801_1979)  
[https://www.jera.co.jp/en/news/information/20241114\\_2053](https://www.jera.co.jp/en/news/information/20241114_2053)  
[https://www.jera.co.jp/en/news/information/20250303\\_2131](https://www.jera.co.jp/en/news/information/20250303_2131)



Photo-3: Goi Thermal Power Station Units 1 to 3 began commercial operation

#### **4. Decommissions of existing inefficient thermal power generation facilities (Demolition of Chita Thermal Power Station) - JPY 0.8 billion allocated**

Regarding Project ⑥ Demolition of Chita Thermal Power Station (LNG), DNV confirmed that JERA already began the demolition work of the existing power generation facilities and smoothly proceeds as planned as of April 2025 (Photo-4).



Photo-4: Demolition work of Chita Thermal Power Station

## ●Principle Two: Process for Project Evaluation and Selection

During evaluation and selection process of the transition project by JERA, DNV confirmed that the transition project met the eligibility criteria and did not conflict with the pre-defined exclusion criteria in the Framework.

- Unfair transactions that do not comply with the laws and regulations of the country, such as bribery, corruption, blackmail, embezzlement, etc.
- Transactions that can cause social problems related to human rights and environment.

DNV confirmed that, JERA, following the specific evaluation and selection process, Finance Strategy and Planning Group made a pre-selection of projects based on the eligibility criteria and the selection process was finalized by Executive Officer, Head of Finance Strategy and Planning Group taking into the consideration of a comprehensive analysis and review of financial, technical and operational, market environment and ESG risks by the relevant departments.

### ●Principle Three: Management of Proceeds

DNV reviewed the evidence on how JERA has managed the funds raised since the bond issuance until March 2025. The status of fund allocation is shown in Table-1.

DNV confirmed that the funds were deposited into a common account at JERA and that Finance Strategy and Planning Group subsequently managed the allocation for each project complied by the accounting rules and regulations and using the accounting systems and the funds management forms of transition bonds. DNV also confirmed that JERA has fully allocated the proceeds (JPY 20 billion) as of the end of March 2025 (see Table-2).

Note that, as mentioned earlier, DNV does not provide no assurance regarding the financial performance of the Bonds, the value of any investment or the long-term environmental benefits of the transaction.

Table-1: Funds allocated

Transition Project	Allocated amount (JPY)			
	~FY2022	FY2023	FY2024	Total
Ammonia substitution demonstration	1.7 billion <sup>*1</sup>	4.2 billion <sup>*3</sup>	2.5 billion <sup>*4</sup>	8.4 billion
Hydrogen substitution demonstration	0.1 billion <sup>*1</sup>	-	-	0.1 billion
Decommissions of existing inefficient thermal power facilities (Goi Thermal Power Station)	10.6 billion <sup>*2</sup>	-	-	10.6 billion
Decommissions of existing inefficient thermal power facilities (Chita Thermal Power Station)	-	-	0.8 billion <sup>*4</sup>	0.8 billion
Total allocation (of which refinancing amount)				19.9 billion (11 billion)

Table-2: Unallocated balance

Details	Amount (JPY)
Amount raised	20 billion
Issuing costs	0.1 billion
Total allocation	19.9 billion
Unallocated balance	0 billion

DNV confirmed that the information on the management of project funds for the NEDO-subsidised ammonia/hydrogen substitution demonstration projects has been verified by NEDO.

- \*1 This information is as of the end of December 2022.
- \*2 This information is as of the end of March 2023.
- \*3 This information is as of the end of December 2023.
- \*4 This information is as of the end of June 2024.

## Principle Four: Reporting

DNV confirmed that JERA will disclose the status of fund allocation and environmental benefits on the JERA website.

The allocation and management of the proceeds and the environmental benefits (project overview and progress) are as follows.

### (1) Allocation and Management of the Proceeds

Transition Project	Allocated amount (JPY)
Ammonia substitution demonstration	8.4 billion
Hydrogen substitution demonstration	0.1 billion
Decommissions of existing inefficient thermal power facilities (Goi Thermal Power Station)	10.6 billion
Decommissions of existing inefficient thermal power facilities (Chita Thermal Power Station)	0.8 billion
Total allocation (20 billion raised) (of which refinancing amount)	19.9 billion (11 billion)
Issuing costs	0.1 billion
Unallocated balance	0 billion

DNV confirmed that the proceeds of JPY 19.9 billion were deposited into a common account at JERA, and that Finance Strategy and Planning Group subsequently managed the allocation for each project complied by the accounting rules and regulations and using the accounting systems and funds management forms of transition bonds. DNV also confirmed that the proceeds have been fully allocated as of the end of March 2025.

## (2) Environmental Benefits

### Environmental benefits (project overview and progress)

Project	Project Overview and Progress	
Expenditures related to demonstration of substitution from fossil fuel to ammonia/hydrogen		
① Demonstration study of 20% ammonia co-firing in a 1 million kW class coal-fired power plant	Project overview	Development and demonstration test of technology to convert 20% of fuel (calorific value ratio) to ammonia at Hekinan Thermal Power Station Unit 4 (Project period: June 2021 - March 2025).
	Progress	Good results were obtained in a demonstration test, with nitrogen oxide (NOx) emissions equal to or lower than those before ammonia substitution (coal single-fuel combustion). In addition, a maximum substitution rate of 28% (at 600,000 kW operation) was achieved.
② Demonstration project to establish the higher-ratio ammonia co-firing technology in the commercial coal-fired power plant	Project overview	Development of a new high ammonia substitution burner and study on equipment specifications (to FY2024), with the aim of conducting technical development and demonstration tests to convert more than 50% (calorific value ratio) of fuel to ammonia at the Hekinan Thermal Power Station. (Project period: FY 2021 to FY 2030)
	Progress	The development of a high ammonia substitution burner capable of substituting more than 50% of ammonia has been completed by IHI Corporation in the combustion test furnace.
④ Technical verification of hydrogen co-firing power generation for the construction of a large-scale hydrogen supply chain	Project overview	Demonstration tests at large-scale LNG-fired power plants in Japan to convert approximately 30% (by volume) of LNG into hydrogen for power generation (Project period: October 2021 to March 2025).
	Progress	Based on the feasibility studies conducted to date, as a power generation operator, no new technological development elements that require demonstration from FY2028 have been identified. Additionally, multiple demonstration tests using large-scale gas turbines for power generation purposes are currently being conducted both domestically and internationally. Therefore, it has been determined that the significance of advancing technological demonstration from FY2028 through this project has been lost. Regarding the “decision on whether to commence plant EPC and verification” set as the stage gate target for FY2024 in this Green Innovation Fund Project, JERA has not reached the decision to proceed with the technical demonstration for this project.

Project	Project Overview and Progress	
		Additionally, JERA is currently conducting the hydrogen property assessment as a separate project to evaluate the potential impact of trace substances (benzene, toluene, etc.) in hydrogen on gas turbines.
<b>Expenditures related to decommissions of existing inefficient thermal power facilities, with the aim of replacement by high-efficiency thermal power facilities</b>		
⑤ Demolition of Goi Thermal Power Station	Project overview	Demolition of existing power generation facilities at Goi Thermal Power Station (LNG) (construction completion date: September 2023)
	Progress	The demolition work was completed in March 2024.
⑥ Demolition of Chita Thermal Power Station	Project overview	Demolition of existing power generation facilities at Chita Thermal Power Station (LNG) (construction completion date: July 2026)
	Progress	The demolition work smoothly proceeds as of April 2025.

Project ③ Demonstration project of high-ratio ammonia co-firing in the commercial coal-fired power plants utilizing ammonia single-fuel burners is not included in the evaluation, as no allocation is made in the NEDO commissioned project (9/10 commissioned + 1/10 incentive delivered) for FY2024.

Project ⑤ Demolition of Goi Thermal Power Station is not included in this evaluation as it has been completed as of March 2024, which was confirmed in the Transition Bond Periodic Review (#2).





## DNV Statement of Opinion

On the basis of the information provided by JERA and the work undertaken, it is DNV's opinion that JERA Transition Bonds meet the criteria established in the Protocol and that it is aligned with the stated definitions or purposes of transition bonds within the CTFH and CTFBG, GBP and GBGL, which are to "enable capital-raising and investment for new and existing projects with environmental benefits" and "provide an investment opportunity with transparent sustainability credentials."

DNV Business Assurance Japan K.K.

23 May 2025

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### About DNV

Driven by our purpose of safeguarding life, property and the environment, DNV enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.

### Disclaimer

Responsibilities of the Management of the Issuer and the Second-Party Opinion Providers, DNV: The management of Issuer has provided the information and data used by DNV during the delivery of this review. Our statement represents an independent opinion and is intended to inform the Issuer management and other interested stakeholders in the Bond as to whether the established criteria have been met, based on the information provided to us. In our work we have relied on the information and the facts presented to us by the Issuer. DNV is not responsible for any aspect of the nominated assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV shall not be held liable if any of the information or data provided by the Issuer's management and used as a basis for this assessment were not correct or complete.



## Schedule-1 Green Bond Eligibility Assessment Protocol

The checklists below (GBP-1 ~ GBP-4) are DNV assessment procedures developed on the basis of the Green Bond Principles 2021 for JERA Transition Bond Eligibility Assessment with specific use of proceeds.

### GBP-1 Use of Proceeds

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
1a	Type of funds	Types of transition bonds are classified into one of the following types defined by GBP. <ul style="list-style-type: none"> <li>• (Standard) Transition Bond/Loan</li> <li>• Transition Revenue Bond/Loan</li> <li>• Transition Project Bond/Loan</li> <li>• Other</li> </ul>	Documents reviewed <ul style="list-style-type: none"> <li>- Framework</li> </ul> Interviews with stakeholders	Through the evaluation work, DNV confirmed that JERA transition finance (bond) falls into the following category:  (Standard) Transition Bond
1b	Transition project classification	The key to a transition bond is that the proceeds will be to be used for transition projects, which should be properly stated in the legal documents relating to the security.	Documents reviewed <ul style="list-style-type: none"> <li>- Framework</li> <li>- Investment plans for the use of proceeds</li> <li>- Information on the progress of financed projects</li> <li>- Amended Shelf Registration Statement</li> </ul> Interviews with stakeholders	DNV confirmed that JERA Transition Bond aims to fund a wide range of transition projects focused on the JERA Group's environmental goals, as described in the Framework.  DNV confirmed that all transition projects were evaluated as conforming to the transition strategy, and the proceeds through the transition bonds were allocated to several nominated transition projects.  The specific projects to which the proceeds were allocated are: ① Demonstration study of 20% ammonia co-firing in 1 million kW class coal-fired power station ② Demonstration project to establish the higher-ratio ammonia co-firing technology in the commercial coal-fired power plant ④ Technical verification of hydrogen co-firing power generation for the construction of a

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings				
				<p>large-scale hydrogen supply chain ⑥Demolition of Chita Thermal Power Station (LNG).</p> <p>Through the assessment, DNV concludes that the nominated transition projects will bring concrete and actual environmental benefits.</p> <p>DNV confirmed that proceeds were allocated to the project outlined ①Demonstration Study of 20% Ammonia Co-firing in 1 MW Class Coal Fired Power Plant, ②Demonstration project to establish the higher-ratio ammonia co-firing technology in the commercial coal-fired power plant, ④Technical verification of hydrogen co-firing power generation for the construction of a large-scale hydrogen supply chain, ⑥Demolition of Chita Thermal Power Station (LNG)” in FY2024.</p> <p>Table: JERA Main initiatives to achieve CO<sub>2</sub> zero emissions (Transition finance nominated projects)</p> <table><tr><th>Eligibility Criteria</th><th>Project Overview (Main Expenditure)</th></tr><tr><td>Expenditures related to demonstration of substitution from fossil fuel to ammonia/hydro gen</td><td><p>① Demonstration study of 20% ammonia co-firing in a 1 million kW class coal-fired power plant</p><ul style="list-style-type: none"><li>- Project period: June 2021 - March 2025</li><li>- Project description: Development and demonstration test of technology to convert 20% of fuel (calorific value ratio) to ammonia at Hekinan Thermal Power Station Unit 4 (to FY2024)</li></ul><p>* Adoption of NEDO subsidized project for “Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation / Research, Development</p></td></tr></table>	Eligibility Criteria	Project Overview (Main Expenditure)	Expenditures related to demonstration of substitution from fossil fuel to ammonia/hydro gen	<p>① Demonstration study of 20% ammonia co-firing in a 1 million kW class coal-fired power plant</p> <ul style="list-style-type: none"><li>- Project period: June 2021 - March 2025</li><li>- Project description: Development and demonstration test of technology to convert 20% of fuel (calorific value ratio) to ammonia at Hekinan Thermal Power Station Unit 4 (to FY2024)</li></ul> <p>* Adoption of NEDO subsidized project for “Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation / Research, Development</p>
Eligibility Criteria	Project Overview (Main Expenditure)							
Expenditures related to demonstration of substitution from fossil fuel to ammonia/hydro gen	<p>① Demonstration study of 20% ammonia co-firing in a 1 million kW class coal-fired power plant</p> <ul style="list-style-type: none"><li>- Project period: June 2021 - March 2025</li><li>- Project description: Development and demonstration test of technology to convert 20% of fuel (calorific value ratio) to ammonia at Hekinan Thermal Power Station Unit 4 (to FY2024)</li></ul> <p>* Adoption of NEDO subsidized project for “Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation / Research, Development</p>							

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
				<div>and Demonstration of Technologies for Ammonia Co-Firing Thermal Power Generation”</div> <div>           ② Demonstration project to establish the higher-ratio ammonia co-firing technology in the commercial coal-fired power plant           <ul style="list-style-type: none"> <li>- Project period: FY2021 to FY2030</li> <li>- Project description: Development of a new high ammonia substitution burner and study on equipment specifications (to FY2024), with the aim of conducting technical development and demonstration tests to convert more than 50% (calorific value ratio) of fuel to ammonia at the Hekinan Thermal Power Station. (Project period: to FY 2030)</li> <li>* Adoption of NEDO Green Innovation Fund Project for “ Fuel Ammonia Supply Chain Establishment ”</li> </ul> </div> <div>           ③ Demonstration project of high-ratio ammonia co-firing in the commercial coal-fired power plants utilizing ammonia single-fuel burners           <ul style="list-style-type: none"> <li>- Project period: FY2021 to FY2030</li> <li>- Project description: Development of a new ammonia single-fuel burner and study of the specifications of the equipment (to FY2024), with the aim of developing technologies and conducting demonstration tests to convert</li> </ul> </div>

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
				<div> <div> more than 50% (calorific value ratio) of fuel into ammonia (by FY2030).  * Adoption of NEDO Green Innovation Fund Project for " Fuel Ammonia Supply Chain Establishment " </div> <div> ④ Technical verification of hydrogen co-firing power generation for the construction of a large-scale hydrogen supply chain   - Project period: October 2021 to March 2025  - Project description: Demonstration tests at large-scale LNG-fired power stations in Japan to convert approximately 30% (by volume) of LNG into hydrogen for power generation.   * Adoption of NEDO Green Innovation Fund Project for "Construction of a Large-Scale Hydrogen Supply Chain" </div> </div>
			Expenditures related to decommissions of existing inefficient thermal power facilities, with the aim of replacement by high-efficiency thermal power facilities	<div> ⑤ Demolition of Goi Thermal Power Station (LNG) </div> <div> ⑥ Demolition of Chita Thermal Power Station (LNG) </div>

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
1c	Environmental benefits	All transition projects to which the funds are used should have clear environmental benefits, the effects of which should be assessed by the issuer and, where possible, quantitatively demonstrated.	Documents reviewed <ul style="list-style-type: none"> <li>- Framework</li> <li>- Investment plan and results for the use of proceeds</li> <li>- Information on the progress of each project</li> <li>- Interviews with stakeholders</li> </ul>	<p>DNV confirmed that transition projects contribute to the goals based on the JERA's transition strategy, and low and decarbonization through the two eligible criteria categories indicated in 1b. The environmental benefit is the reduction of CO<sub>2</sub> emissions, which has been quantitatively or qualitatively evaluated.</p> <p>DNV also confirmed that, in the annual report, the outline and progress of each project were reported to the extent practicable, taking into accounts the characteristics of the project.</p>
1d	Refinancing rate	If all or part of the proceeds are used or may be used for refinancing, the issuer will indicate the estimated ratio of the initial investment to the refinancing and, where appropriate, it is recommended to clarify which investment or project portfolio is subject to refinancing.	Documents reviewed <ul style="list-style-type: none"> <li>- Framework</li> <li>- Investment plan and results for the use of proceeds</li> <li>- Information related to each project</li> <li>- Interviews with stakeholders</li> </ul>	<p>DNV confirmed that JERA plans to use all proceeds either for new investment, refinancing or for both for one or more of the nominated eligible projects.</p> <p>Through the reporting (annual report), DNV also confirmed that JERA disclosed the amount of the proceeds that was allocated for refinancing.</p>

## GBP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
2a	Project selection process	<p>Transition bond issuers should provide an overview of the process of qualifying projects for which transition bond funding will be used. This includes (but is not limited to):</p> <ul style="list-style-type: none"> <li>• The process by which the issuer determines that the project in question is included in the business category of a eligible transition project.</li> <li>• Creation of criteria for eligibility of projects for which transition bond funding will be used</li> <li>• Environmental sustainability goals</li> </ul>	<p>Documents reviewed</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Information related to each project</li> <li>- Interviews with stakeholders</li> </ul>	<p>DNV confirmed that JERA has a process and a system of determining the eligibility of the projects to use transition bond funding and that these are clearly specified in the Framework.</p>
2b	Issuer's environmental and social governance framework	<p>In addition to criteria and certifications, the information published by issuers regarding the transition bond process also considers the quality of performance of the issuer's framework and environmental sustainability.</p>	<p>Documents reviewed</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Information related to each project</li> </ul> <p>Interviews with stakeholders</p>	<p>DNV confirmed through the assessment that JERA takes into account and works on the following.</p> <ul style="list-style-type: none"> <li>● JERA takes into account its compliance with environmental laws, regulations, ordinances and rules, and whether the environmental benefits such as CO<sub>2</sub> reductions are clear in the entire life cycle or in each process, when selecting transition projects.</li> <li>● JERA commits to the preservation of the surrounding environment in the operation and implementation of their projects with their related departments.</li> </ul> <p>DNV confirmed that the transition projects implemented by JERA are consistent with its management and environmental policies, as well as with the transition strategy, goals and pathway.</p>

## GBP-3 Management of Proceeds

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
3a	Tracking procedure - 1	The net proceeds from transition bonds should be managed in sub-accounts, included in a sub-portfolio, or otherwise tracked. It should also be certified by the issuer in a formal internal process related to the issuer's investment and financing operations for the Transition Project.	Documents reviewed <ul style="list-style-type: none"> <li>- Framework</li> <li>- Funds management forms of transition bonds</li> <li>- Interviews with stakeholders</li> </ul>	DNV confirmed that the proceeds from the transition finance are traceable by JERA's accounting systems etc, and the system actually used and documents made specially for the system are proven based on it through the assessment.
3b	Tracking procedure - 2	During the redemption period, the balance of the proceeds being tracked should be adjusted at regular intervals to match the amount allocated to eligible projects undertaken during that period.	Documents reviewed <ul style="list-style-type: none"> <li>- Framework</li> <li>- Funds management forms of transition bonds</li> <li>- Interviews with stakeholders</li> </ul>	DNV confirmed that JERA regularly (at least once a year) reviewed the balance of the transition finance using the accounting systems / documents described in 3a during the period from execution of transition finance to redemption or repayment.
3c	Temporary holding	If no investment or payment has been made in a qualified transition project, the issuer should also inform the investor of the possible temporary investment method for the balance of unallocated proceeds.	Documents reviewed <ul style="list-style-type: none"> <li>- Framework</li> <li>- Funds management forms of transition bonds</li> <li>- Interviews with stakeholders</li> </ul>	Through the verification process based on JERA's accounting systems and related documents, DNV confirmed that the balance of unallocated proceeds was recognized sequentially.  DNV confirmed through the Framework and assessment that the balance of unallocated proceeds was managed in cash or cash equivalents. DNV also confirmed that JERA has been fully allocated the proceeds (JPY 20 billion) as of the end of March 2025.



## GBP-4 Reporting

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
4a	Periodic Reporting	<p>In addition to reporting on the use of proceeds and the temporary investment of unallocated proceeds, the issuer will consider each project at least once a year for projects to which the transition bonds have been allocated, taking into account the following: A list of each project should be provided.</p> <ul style="list-style-type: none"> <li>- Confidentiality and competitive considerations.</li> <li>- Outline of each project, expected sustainable environmental and social benefits</li> </ul>	<p>Documents reviewed</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Annual Report</li> <li>- JERA Website</li> </ul> <p>Interviews with stakeholders</p>	<p>DNV confirmed that the JERA will carry out reporting of transition bonds (annually) and disclose the allocation status of proceeds until the proceeds are fully allocated.</p> <p>DNV also confirmed that JERA will disclose information on the outline and progress of the projects allocated the proceeds and environmental benefits until the eligible projects completed.</p> <p>Note that, even after the allocation plan or allocation has been completed, JERA plans to report in a timely manner or in its reporting on any changes in transition strategy or pathway, or any major changes in the allocation plan or project implementation status (e.g., interruption of a project for which allocation has been started, significant deferral on an annual basis, sale or decommissioning, etc.). DNV confirmed that there were nonetheless no significant changes in this reporting period.</p> <p>The reporting will be published on the website.</p> <p>&lt;Allocation status of proceeds&gt;</p> <ul style="list-style-type: none"> <li>- Eligibility criteria and allocation amount</li> <li>- Balance of unallocated amounts and the management method</li> <li>- Approximate amount of the portion of the proceeds allocated for refinancing</li> </ul> <p>&lt;Environmental benefits&gt;</p> <ul style="list-style-type: none"> <li>- Environmental benefits are disclosed within the scope of confidentiality, to the extent practicable, and in</li> </ul>

Ref.	Criteria	Requirements	Work Undertaken (items reviewed)	DNV Findings
				<p>consideration of the characteristics of the project, including an overview of the project (including progress, completion, operation, etc.)</p> <p>&lt;Other&gt;</p> <ul style="list-style-type: none"> <li>- Efforts to achieve zero CO<sub>2</sub> emissions by 2050 will be reviewed as appropriate in light of policy and technological trends and disclosed as required</li> </ul> <p>The details disclosed for the transition projects that were the subject of fund allocation in this reporting period are provided in the section of Element 4. Reporting in this document.</p>

## Reference (Annexes)

- /1/ JERA Transition Finance Framework (updated on 31 August 2022)
- /2/ Funds management forms of transition bonds (22 April 2025)
- /3/ Draft Annual Report regarding transition bonds (22 April 2025)
- /4/ Progress reports on financed projects (22 April 2025)