



## SECOND PARTY OPINION

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### OSAKA GAS CO., LTD.

### Transition Finance Periodic Review (#1)

Prepared by: DNV Business Assurance Japan K.K.

Location: Kobe, Japan

Date: 8 September 2023

Ref. Nr.: PRJN-333926-2023-AST-JPN-01

#### Revision History

Date of Issue	Remarks
10 March 2022	Green/Transition Finance Framework Second Party Opinion First edition
1 August 2022	The eligibility assessment section for bonds described in the First Edition was detached and revised as a master SPO
8 September 2023	Transition Finance Periodic Review (#1) (1st Transition Bond, 2nd Transition Bond, Transition Loan)



## Scope and Objectives

Osaka Gas Co., Ltd. (hereinafter, "Osaka Gas") has commissioned DNV Business Assurance Japan K.K. (hereinafter, "DNV") to conduct periodic reviews of the "Osaka Gas Transition Finance (1st Transition Bond (The 44th Unsecured Corporate Bond), 2nd Transition Bond (The 47th Unsecured Corporate Bond), and Transition Loan, (hereafter, 'The Loan and Finance'))."

The objective of the periodic review of DNV is to conduct an assessment to confirm that these Osaka Gas Finance meet the criteria such as the Climate Transition Finance Handbook 2020 (hereinafter, "CTFH"), Basic Guidelines on Climate Transition Finance (FSA, METI and MOE 2021; hereinafter, "CTFBG") and the Green Bond Principles (Green Bond Principles 2021; hereinafter, "GBP") as finance that meets the four elements of transition and specifies the use of the funds, (hereinafter, "GBP"), Green Bond Guidelines (Ministry of Environment 2020; hereinafter, "GBGLs"), Green Loan Principles (Green Loan Principles 2021; hereinafter, "GLP") and Green Loan Guidelines (Ministry of Environment 2020; hereinafter, "GLGLs") as financing that meets the four elements of CTFBG and transitions with specific use of proceeds, and to provide a second party opinion on the eligibility of the Loan and Finance.

Osaka Gas issued JPY 10 billion 1st Transition Bond (The 44th Unsecured Corporate Bond) on 2 June 2022, JPY 27 billion 2nd Transition Bond (The 47th Unsecured Corporate Bond) on 1 September 2022, and JPY 35 billion Transition Loan in January 2023. DNV conducted the first periodic review for the period from the time of each financing to 31 March 2023, based on the CTFH and CTFBG, GBP and GBGLs, GLP and GLGLs.

This report provides a periodical review of the requirements for Transition Finance with specific use of proceeds (Elements 1 to 4, which are 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 Osaka Gas.

In this paper, no assurance is provided regarding the financial performance of Transition Finance, the value of any investment or the long-term environmental benefits of the transaction.

DNV has confirmed that since the revision of the Master SPO in August 2022, Osaka Gas transition strategy has been updated in the Integrated Report 2022 and Daigas Group Energy Transition 2030. A summary of the updates is as follows.

## Disclosure Element - 2 Business Model Environmental Materiality (Level of Importance)

Scenario analyses based on the IEA's 1.5°C scenario (NZE2050) and 2.6°C scenario (STEPS) have been added.

## Disclosure Element - 3 Climate Transition Strategy to be Science-Based (including targets and pathways)

The following items have been added to the 2030 interim targets.

- Reduction of CO<sub>2</sub> emissions (Scope 1, 2, and 3) in the domestic supply chain ... 5 million tons
- Introduction of e-methane ... 1%

Although the Ministry of Economy, Trade and Industry's transition roadmap for the gas sector depicts a pathway where the demand for natural gas increases in the gas industry due to the fuel shift in society as a whole and gas companies' CO<sub>2</sub> emissions (Scope 3) will increase in a short term, Osaka Gas' domestic supply chain CO<sub>2</sub> emissions as of 2030 (Scope 1, 2, and 3) by 5 million tons in absolute terms is considered to be a very progressive initiative.

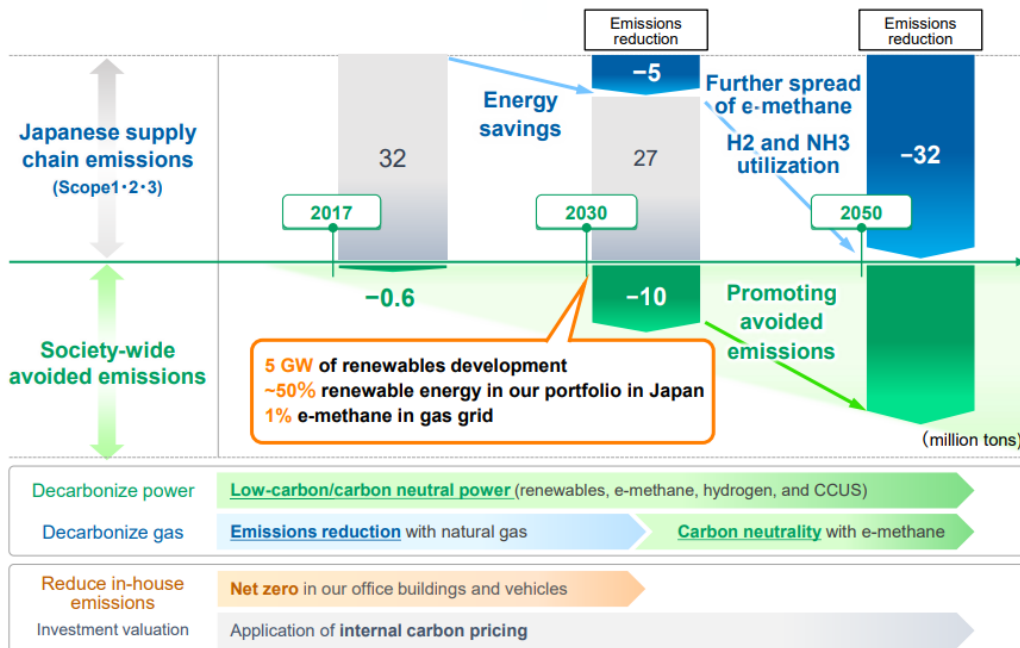


Figure-1 Daigas Group's CO<sub>2</sub> emissions reduction roadmap

(Source: Daigas Group Energy Transition 2030)

## Standards/Guidelines to be applied

No.	Standards/Guidelines	Scheme Owner	Applied Level
1.	Climate Transition Finance Handbook (CTFH) * <sup>1</sup>	International Capital Markets Association (ICMA), 2020.	Apply
2.	Basic Guidelines on Climate Transition Finance (CTFBG) * <sup>1</sup>	FSA, METI, MOE, 2021.	Apply
3.	Green Bond Principles (GBP) * <sup>2</sup>	International Capital Markets Association (ICMA), 2021.	Apply
4.	Green Bond Guidelines (GBGLs) * <sup>2</sup>	Ministry of the Environment, 2020.	Apply
5.	Green Loan Principles (GLP) * <sup>2</sup>	Loan Market Association (LMA) and others, 2021.	Apply
6.	Green Loan Guidelines (GBGLs) * <sup>2</sup>	Ministry of the Environment, 2020.	Apply

\*1 Climate transition: The concept of climate transition focuses principally on the credibility of an fundraiser'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 implementing as a bond/loan that meets the four elements of transition and has a specific use of proceeds (quoted from CTFBG).



## Responsibilities of Osaka Gas and DNV

The management of Osaka Gas 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 Osaka Gas management and other interested stakeholders in The Loan and Finance 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 Osaka Gas. DNV is not responsible for any aspect of the nominated transition project 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 Osaka Gas management and used as a basis for this assessment were not correct or complete.



## Basis of DNV's Opinion

To provide as much flexibility as possible for Osaka Gas, DNV has adapted the CTFH and CTFBG, GBP and GBGLs, GLP and GLGLs, which required for the management of Transition Finance with specific use of proceeds, in order to develop a Transition Finance Eligibility Assessment Protocol (hereinafter, the "Protocol") specific to the fundraiser. The Protocol is applicable to Transition Finance with specific use of proceeds based on the CTFH and CTFBG, GBP and GBGLs, GLP and GLGLs.

DNV's Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle behind the criteria is that a Transition Finance should "provide an investment opportunity with transparent sustainability credentials."

As per our Protocol, the criteria against which The Loan and Finance have been reviewed are grouped under the four Principles:

- **Principle One: Use of Proceeds**

The Use of Proceeds criteria are guided by the requirement that the 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**

The Project Evaluation and Selection criteria are guided by the requirements that the Transition Finance (with specific use of proceeds) fundraiser 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 requirements that the Transition Finance (with specific use of proceeds) should be tracked within the issuing organization, that 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 at least a sustainability reporting to the Finance investors should be made of the use of Transition Finance proceeds and that quantitative and/or qualitative performance indicators should be used, where feasible.

## Work Undertaken

Our work constituted a high-level review of the available information, based on the understanding that this information was provided to us by Osaka Gas 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:

### **Pre-funding assessment of Transition Finance** \*Not included in this report

- Creation of an Osaka Gas specific Protocol, adapted to the purpose of The Loan and Finance.
- Assessment of documentary evidence provided by Osaka Gas on The Loan and Finance and supplemented by a high-level desktop research. These checks refer to current assessment best practices and standards methodology.
- Discussions with Osaka Gas management, and review of relevant documentation and evidence related to the criteria of the Protocol.
- Documentation of findings against each element of the criteria.

### **Periodic (Annual) Review** \*This report

- Assessment of evidential documents provided by the Osaka Gas after issuance of the Transition Finance, and supplemental assessment by desk review from a higher perspective. These checks refer to current evaluation best practices and standard methodologies.
- Interview with managers of Osaka Gas, and review of the relevant documentation.
- Field research and inspection (if necessary).
- Review of the nominated projects and assets at the time of the periodic review.
- Document creation of periodic review observation results described in this report.

## Findings and DNV's Opinion

DNV's findings and opinion are as described below.

### (1) Principle One: Use of Proceeds

DNV has confirmed that, as of 31 March 2023, Osaka Gas had used the funds raised through the 1st Transition Bond, 2nd Transition Bond, and Transition Loan for the following projects.

#### 1. Inami Wind Power Plant - 4.5 billion JPY allocated (1st Transition Bond)

The project operates a 26.0 MW onshore wind farm located near the Kuroshio Fruit Line between Inami City and Minabe Town, through an investment in Inami Wind Farm Co., Ltd. The project started operation in June 2018 and as of August 2023, operation was continuing smoothly, and the environmental benefits of the project are being realised.

Renewable energy sources are projects that contribute to the decarbonisation of power sources in the "Daigas Group Roadmap to Carbon Neutrality" and are positioned as a necessary initiative for the realisation of Osaka Gas' Transition Strategy.



Figure-2 Inami Wind Power Plant



## 2. Daigas Oita Mirai Solar - 1.2 billion JPY allocated (1st Transition Bond)

The project operates a 26.5 MW photovoltaic power generation facility located in the coastal industrial area of Oita City, Oita Prefecture, Japan, through an investment in Daigas Oita Mirai Solar Co., Ltd. The facility started operation in May 2013 and was still running smoothly as of August 2023. The environmental benefits are being realised.

Renewable energy sources are projects that contribute to the decarbonisation of power sources in the “Daigas Group Roadmap to Carbon Neutrality” and are positioned as a necessary initiative for the realisation of Osaka Gas' Transition Strategy.



Figure-3 Daigas Oita Mirai Solar Power Plant

## 3. Noheji Mutsu Bay Wind Farm - 1.5 billion JPY allocated (1st Transition Bond)

The project involves the operation of a 39.6 MW onshore wind farm located in Noheji Kamikita-gun, Aomori Prefecture, Japan, through an investment in GK Aomori Wind Power. The facility started operation in January 2023 and was still running smoothly as of August 2023. The environmental benefits are being realised.

Renewable energy sources are projects that contribute to the decarbonisation of power sources in the “Daigas Group Roadmap to Carbon Neutrality” and are positioned as a necessary initiative for the realisation of Osaka Gas' Transition Strategy.



Figure-4 Noheji Mutsu Bay Wind Farm

#### 4. Yokohama Town Wind Farm - 1.8 billion JPY allocated (1st Transition Bond)

The project operates a 43.2 MW onshore wind power generation facility located in Yokohama-machi, Kamikita-gun, Aomori Prefecture, Japan, through an investment in GK Yokohama Town Wind Power. The project was under construction in FY2022; thus, environmental benefits were not included in this report.

Renewable energy sources are projects that contribute to the decarbonisation of power sources in the “Daigas Group Roadmap to Carbon Neutrality” and are positioned as a necessary initiative for the realisation of Osaka Gas' Transition Strategy.



Figure-5 Yokohama Town Wind Farm

#### 5. Shikoku Central Energy Natural Gas Supply - 1 billion JPY allocated (1st Transition Bond)

This project contributes to fuel switching by constructing an LNG satellite terminal at the East Wharf of Mishima-Kawanoe Port in Shikokuchuo City, Ehime Prefecture, and supplying natural gas to various industries, through an investment in Shikoku Central Energy Co.

The fuel conversion from coal and oil to low-carbon LNG is a project that contributes to the advanced use of natural gas and cogeneration in the “Daigas Group Roadmap to Carbon Neutrality” and is positioned as a necessary initiative to realise Osaka Gas' transition strategy. It is also consistent with the Ministry of Economy, Trade and Industry's transition roadmap for the gas sector.

The facility started operation in December 2022 and was still running smoothly as of August 2023. The environmental benefits are being realised.

**6. Kuwaharajyou Mega Solar (No. 4) - 1.5 billion JPY allocated in total with project #7 indicated below (2nd Transition Bond)**

The project involves the operation of an approximately 12.0 MW photovoltaic power generation facility located in Izumi City, Kagoshima Prefecture, Japan, through an investment in D&D Solar GK. The facility started operation in April 2020 and was still running smoothly as of August 2023. The environmental benefits are being realised.

Renewable energy sources are projects that contribute to the decarbonisation of power sources in the “Daigas Group Roadmap to Carbon Neutrality” and are positioned as a necessary initiative for the realisation of Osaka Gas' Transition Strategy.



Figure-6 Kuwaharajyou Mega Solar (No. 4)

**7. Isohara Extra-high Power Plant- 1.5 billion JPY allocated in total with project #6 indicated above (2nd Transition Bond)**

The project involves the operation of an approximately 35.0 MW photovoltaic power generation facility located in Kitaibaraki City, Ibaraki Prefecture, Japan, through an investment in D&D Solar GK.

Renewable energy sources are projects that contribute to the decarbonisation of power sources in the “Daigas Group Roadmap to Carbon Neutrality” and are positioned as a necessary initiative for the realisation of Osaka Gas' Transition Strategy.



Figure-7 Isohara Extra-high Power Plant

**8. Himeji Natural Gas Power Plant - 25.5 billion JPY allocated (2nd Transition Bond), 34.69 billion JPY allocated (Transition Loan)**

Through its investment in Himeji Natural Gas Power Generation Co., Ltd., the project involves the operation of a power plant based on a gas turbine combined cycle power generation system with a highly efficient 1650°C-class gas turbine and a waste heat recovery steam exchanger. In the future, the gas turbine is designed to enable low-carbon power generation through hydrogen co-firing by modifying the equipment, and measures are in place to avoid lock-in.

The Himeji Natural Gas Power Plant is an indirect replacement for inefficient thermal power plants and thermal power plants with relatively high CO<sub>2</sub> emissions and is a project that contributes to the advanced use of natural gas and cogeneration in the "Daigas Group Roadmap to Carbon Neutrality," and is positioned as a necessary initiative for realising Osaka Gas' transition strategy. The project is also consistent with both the Ministry of Economy, Trade and Industry's transition roadmap for the gas sector and the electricity sector.

Preparation work for Unit 1 and Unit 2 started in March 2022 and the main construction work began in August 2022, with construction work progressing smoothly towards the start of operation in January 2026 and May 2026, respectively.

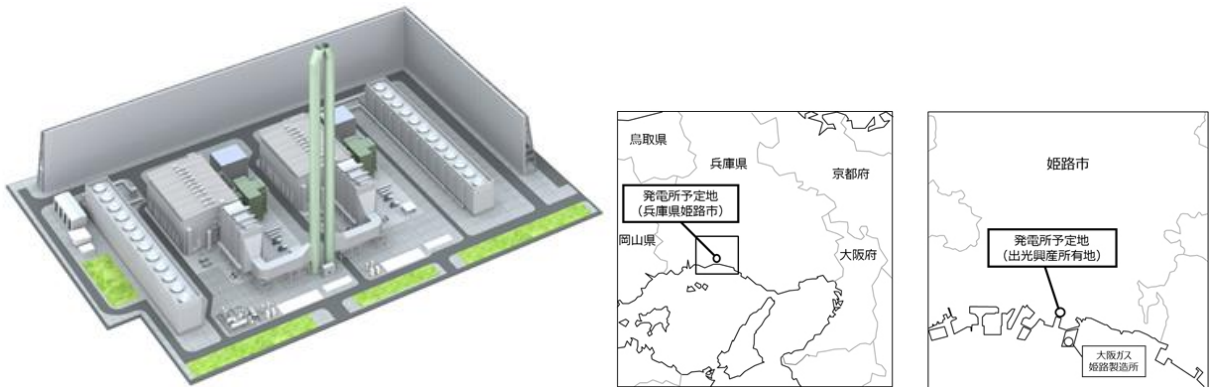


Figure-8 Himeji Natural Gas Power Plant





## **(2) Principle Two: Process for Project Evaluation and Selection**

DNV confirmed through the approval documents and other evidence that when Osaka Gas evaluated and selected transition projects, the Finance Department selected candidates based on the eligibility criteria defined in the Framework, and that the finance officer made the final decision after consultation with the business units and other departments and the Planning Department.

DNV has confirmed that Osaka Gas has considered potentially negative environmental and social impacts in assessing the eligibility of each project, and that the required facility approvals and permits have been obtained for the subject facilities and projects, and that the environmental assessment procedures, etc. were appropriate. DNV confirmed that Osaka Gas has established the following systematic procedures for environmental and social impacts of the power generation project.

## **(3) Principle Three: Management of Proceeds**

DNV confirmed how Osaka Gas has managed the proceeds since the financing was executed until 31 March 2023. The allocation of proceeds is shown in Tables 1~3 in Principle 4.

DNV confirmed that the proceeds are managed on an annual basis by the Finance Department of Osaka Gas, which prepares dedicated ledgers and manages the allocation status until the full amount has been allocated.

DNV confirmed that Osaka Gas had completed the full allocation of proceeds of the 1st and 2nd Transition Bonds to each eligible project as planned by 31 March 2023. DNV also confirmed that as of 31 March 2023, the unallocated proceeds of the Transition Loan (JPY 0.31 billion) were managed in cash or cash equivalents and that the allocation had already been completed in FY2023, immediately after the reporting year.

Note as mentioned earlier, no assurance is provided regarding the financial performance of Transition Finance, the value of any investment or the long-term environmental benefits of the transaction.

**(4) Principle Four: Reporting**

DNV has confirmed that Osaka Gas plans to disclose the allocation status of proceeds and environmental benefits on its website. According to the Osaka Gas Framework, the allocation status of proceeds is planned to be reported until the proceeds have been fully allocated and the environmental benefits are reported until the finance is redeemed or repaid.

Through periodic reviews, DNV confirmed that the environmental benefits brought about by the Transition Project had been properly calculated using the method set out by Osaka Gas before the financing was executed, and that the environmental benefits were generally achieved as planned.

The following table shows the allocation status of proceeds and environmental benefits of the 1st Transition Bond, the 2nd Transition Bond and Transition Loan in the period up to 31 March 2023.

**(I) Allocation Status**

**1st Transition Bond (The 44th Unsecured Corporate Bond)**

DNV has confirmed that the proceeds from the 1st Transition Bond (The 44th Unsecured Corporate Bond) were fully allocated as planned, as shown in Table-1.

Table-1: 1st Transition Bonds (The 44th Unsecured Corporate Bonds) Allocation Status

Eligibility Criteria	Project Name	Amount of Proceeds	Allocation amount		Unallocated Amount
			Refinance	New Investment	
Renewable energy source	Inami Wind Power Plant	10 billion JPY	4.5 billion	-	-
	Noheji Mitsu Bay Wind Farm		1.5 billion	-	-
	Yokohama Town Wind Farm		1.8 billion	-	-
	Daigas Oita Mirai Solar Power Plant		1.2 billion	-	-
Natural gas cogeneration high-level use	Shikoku Central Energy Natural Gas Supply		0.82 billion	0.18 billion	-
Total Amount			10 billion JPY (Fully allocated)		0 billion JPY

**2nd Transition Bond (The 47th Unsecured Corporate Bond)**

DNV confirmed that the proceeds from the 2nd Transition Bond (The 47th Unsecured Corporate Bond) were fully allocated as planned, as shown in Table-2.

Table-2: 2nd Transition Bonds (The 47th Unsecured Corporate Bonds) Allocation Status

Eligibility Criteria	Project Name	Amount of Proceeds	Allocation Amount		Unallocated Amount
			Refinance	New Investment	
Renewable energy source	Kuwaharajyou Mega Solar (No. 4)	27 billion JPY	1.5 billion	-	-
	Isohara Extra-high Power Plant			-	-
Thermal power supply/advanced use of natural gas and cogeneration	Himeji Natural Gas Power Plant		25.5 billion	-	-
Total Amount			27 billion JPY (Fully allocated)		0 billion JPY

**Transition Loan**

DNV confirmed that, as shown in Table-3, the proceeds from the Transition Loan were progressively allocated as planned and the unallocated amount as of 31 March 2023 was 0.31 billion, which was managed in cash or cash equivalents. It was confirmed that the unallocated proceeds had already been fully allocated in FY2023, immediately after the reporting year.

Table-3: Transition Loan Allocation Status

Eligibility Criteria	Project Name	Amount of Proceeds	Allocation Amount		Unallocated Amount
			Refinance	New Investment	
Thermal power supply/advanced use of natural gas and cogeneration	Himeji Natural Gas Power Plant	35 billion JPY	31 billion	3.69 billion	0.31 billion
Total Amount			34.69 billion JPY		0.31 billion JPY



**(II) Environmental benefits**

**1st Transition Bond (The 44th Unsecured Corporate Bond)**

(1) Renewable energy source

DNV confirmed that as of August 2023, the projects in the table below, which were eligible for allocation, were operating smoothly and were showing environmental benefits.

Project Name	Start of Operation	Equipment Capacity	Environmental Benefits* <sup>1</sup> (FY2022 results)
Inami wind Power Plant	Jun 2018	26.0 MW	18,412 t-CO <sub>2</sub> /year
Noheji Mutsu Bay Wind Farm	Jan 2023	39.6 MW	6,859 t-CO <sub>2</sub> /year* <sup>2</sup>
Yokohama Town Wind Farm	Apr 2023	43.2 MW	No results for FY2022 due to construction in progress
Daigas Oita Mirai Solar	May 2013	26.5 MW	19,318 t-CO <sub>2</sub> /year

\*1 Environmental benefits:

Actual electricity generation (kWh) X Percentage of contribution (%) X Average CO<sub>2</sub> emission factor for thermal power sources (kg-CO<sub>2</sub> /kWh) X 1/1000

\*2 Since the start of operation in January 2023.

(2) Advanced use of natural gas and cogeneration

DNV confirmed that as of August 2023, the projects in the table below, which were eligible for allocation, were in good supply and were showing environmental improvement benefits.

Project Name	Start of Supply	Environmental Benefits* <sup>3</sup> (FY2022 results)
Shikoku Central Energy Natural Gas Supply	Dec 2022	5,174 t-CO <sub>2</sub> /year* <sup>4</sup>

\*3 Environmental benefits:

("CO<sub>2</sub> emissions of coal, oil, etc. before fuel conversion" - "CO<sub>2</sub> emissions of LNG after fuel conversion") X Investment ratio (%)

\*4 Since start of supply in December 2022



**2nd Transition Bond (The 47th Unsecured Corporate Bond)**

(1) Renewable energy source

DNV confirmed that as of August 2023, the projects in the table below, which were eligible for allocation, were operating smoothly and were showing environmental improvement benefits.

Project Name	Start of Operation	Equipment Capacity	Environmental Benefits <sup>*5</sup> (FY2022 results)
Kuwaharajyou Mega Solar (No.4)	Apr 2020	Approx. 12.0 MW	17,572 t-CO <sub>2</sub> /year
Isohara Extra-high Power Plant	Jan 2021	Approx. 35.0 MW	

\*5 Environmental benefits:

Actual electricity generation (kWh) X Percentage of contribution (%) X Average CO<sub>2</sub> emission factor for thermal power sources (kg-CO<sub>2</sub> /kWh) X 1/1000

(2) Advanced use of natural gas and cogeneration

DNV has confirmed that as of August 2023, construction work on the projects in the table below, which were eligible for allocation, was progressing well with the aim of starting operation in 2026 as originally planned.

Project Name	Start of Operation (planned)	Equipment Capacity	Environmental Benefits (FY2022 results)
Himeji Natural Gas Power Plant	Unit 1: January 2026 Unit 2: May 2026	1245.2 MW	No results for FY2022 due to construction in progress



### **Transition Loan**

(1) Advanced use of natural gas and cogeneration

DNV has confirmed that as of August 2023, construction work on the projects in the table below, which were eligible for allocation, was progressing well with the aim of starting operation in 2026 as originally planned.

<b>Project Name</b>	<b>Start of Operation (planned)</b>	<b>Equipment Capacity</b>	<b>Environmental Benefits (FY2022 results)</b>
Himeji Natural Gas Power Plant	Unit 1: January 2026 Unit 2: May 2026	1245.2 MW	No results for FY2022 due to construction in progress



## Assessment Conclusion

On the basis of the information provided by Osaka Gas and the work undertaken, it is DNV's opinion that the Transition Finance carried out by Osaka Gas meets the criteria established in the Protocol, and that it is aligned with the stated definition or purpose of Climate Transition Finance as stated in the CTFH and CTFBG, GBP and GBGLs, GLP and GLGLs as "enable capital-raising and investment for new and existing projects with environmental benefits" and "providing an investment opportunity with transparent sustainability credentials."

DNV Business Assurance Japan K.K.

8 September 2023

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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. 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 Fundraiser and the Second-Party Opinion Providers, DNV: The management of the Fundraiser has provided the information and our statement represents an independent opinion and is intended to inform the Fundraiser management and our statement represents an independent opinion and is intended to inform the Fundraiser 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 Fundraiser. Thus, DNV shall not be held liable if any of the information or data provided by the Fundraiser is incorrect. Thus, the DNV shall not be held liable if any of the information or data provided by the Fundraiser's management and used as a basis for this assessment were not correct or complete.



## Schedule - 1 Green Finance Eligibility Assessment Protocol

The following (GBP/GLP-1 ~ GBP/GLP-4) are DNV's Green Finance Eligibility Assessment Protocol created for Osaka Gas based on the requirements of GBP/GBGLs and GLP/GLGLs. "Confirmed Documents" in the work undertaken include internal documents of fundraiser and are provided by Osaka Gas as evidence of eligibility judgment for DNV.

Although the terms GBP and GLP are used here in accordance with practice, this section refers to the criteria and the criteria to be referred to in the case of Transition Finance (Bond & Loan) that specifies the use of funds under the CTFH and CTFBG, such as transition projects. Requirements and should therefore be read in the context of transitions as appropriate.

### GBP/GLP-1 Use of Proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1a	Type of Funds	<p>The types of green/transition finance fall into one of the following types as defined in the GBP/GLP.</p> <ul style="list-style-type: none"> <li>• (standard) Green/transition bonds/loans</li> <li>• Green/transition revenue bonds/loans</li> <li>• Green/transition project bonds/loans</li> <li>• Other</li> </ul>	<p>Confirmed Documents</p> <ul style="list-style-type: none"> <li>- framework</li> </ul> <p>Interviews with stakeholders</p>	<p>DNV has identified the following categories of Transition Finance (bonds/loans) through its assessment work.</p> <p>(Standard) Transition Bonds/Loans</p>
1b	Transition Project Classification	<p>The key to a Transition Finance is that the proceeds will be used for a Transition Project, which should be properly stated in the legal documents relating to the security.</p>	<p>Confirmed Documents</p> <ul style="list-style-type: none"> <li>- framework</li> <li>- Outline of the project</li> <li>- supplementary document</li> </ul> <p>Interviews with stakeholders</p>	<p>DNV confirmed that the Daigas Group Green/Transition Finance is intended to fund a wide range of green/transition projects focused on Osaka Gas' environmental goals and transition strategy, as set out in the Framework and in the table below.</p> <p>Specifically, all green/transition finance categories and eligible project candidates listed in the table below were assessed as meeting the transition strategy, and the funds proceed through transition finance were allocated to one or more of the transition</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings																										
				<p>finance eligible project candidates. The proceeds from Transition Finance were allocated to one or more of the Transition Finance Eligible Project Candidates. Transition projects were disclosed in statutory and other documents.</p> <p>Through the assessment, DNV concludes that the potential Transition-eligible project candidates provide tangible and genuinely environmental benefits.</p> <p>Table: Daigas Group Key initiatives to achieve carbon neutrality (green/transition finance candidate projects)</p> <table border="1" data-bbox="1330 667 2114 1409"> <thead> <tr> <th colspan="2" data-bbox="1330 667 1509 715">Eligible Criteria</th> <th colspan="2" data-bbox="1509 667 2114 715">Eligible Criteria &amp; Project Overview</th> </tr> </thead> <tbody> <tr> <td data-bbox="1330 715 1370 818" rowspan="2">1)</td> <td data-bbox="1370 715 1509 818" rowspan="2">Decarbonization of gas energy</td> <td data-bbox="1509 715 1671 770">Hydrogen utilization</td> <td data-bbox="1671 715 2114 770">Methanation, direct use (chemical looping combustion technology), etc.</td> </tr> <tr> <td data-bbox="1509 770 1671 818">Biogas</td> <td data-bbox="1671 770 2114 818">On-site utilization in domestic/global scale</td> </tr> <tr> <td data-bbox="1330 818 1370 999" rowspan="2">2)</td> <td data-bbox="1370 818 1509 999" rowspan="2">Decarbonization of power generation</td> <td data-bbox="1509 818 1671 898">Renewable power generation</td> <td data-bbox="1671 818 2114 898">Solar power plants, onshore wind farm, offshore wind farm, biomass power plants, etc.</td> </tr> <tr> <td data-bbox="1509 898 1671 999">Thermal power generation</td> <td data-bbox="1671 898 2114 999">Use of carbon neutral fuels such as synthetic methane, hydrogen and ammonia, CCUS (Carbon Capture, Utilization and Storage), etc.</td> </tr> <tr> <td data-bbox="1330 999 1370 1409" rowspan="4">3)</td> <td data-bbox="1370 999 1509 1409" rowspan="4">Low-carbonization</td> <td data-bbox="1509 999 1671 1046">Fuel Cells</td> <td data-bbox="1671 999 2114 1046">Enhancing efficiency and downsizing, etc.</td> </tr> <tr> <td data-bbox="1509 1046 1671 1150">Advanced utilization of natural gas and CHP</td> <td data-bbox="1671 1046 2114 1150">Support for converting fuel from oil and coal to natural gas Demonstration of building micro grid Use of carbon neutral LNG</td> </tr> <tr> <td data-bbox="1509 1150 1671 1230">Advanced energy utilization</td> <td data-bbox="1671 1150 2114 1230">VPP, smart energy systems, etc.</td> </tr> <tr> <td data-bbox="1509 1230 1671 1409">Other (Reduction of CO2 emission associated with own activities)</td> <td data-bbox="1671 1230 2114 1409">Cryogenic power generation in the city gas production process, Cryogenic power generation facilities, energy efficiency renovation work of buildings, etc.</td> </tr> </tbody> </table>	Eligible Criteria		Eligible Criteria & Project Overview		1)	Decarbonization of gas energy	Hydrogen utilization	Methanation, direct use (chemical looping combustion technology), etc.	Biogas	On-site utilization in domestic/global scale	2)	Decarbonization of power generation	Renewable power generation	Solar power plants, onshore wind farm, offshore wind farm, biomass power plants, etc.	Thermal power generation	Use of carbon neutral fuels such as synthetic methane, hydrogen and ammonia, CCUS (Carbon Capture, Utilization and Storage), etc.	3)	Low-carbonization	Fuel Cells	Enhancing efficiency and downsizing, etc.	Advanced utilization of natural gas and CHP	Support for converting fuel from oil and coal to natural gas Demonstration of building micro grid Use of carbon neutral LNG	Advanced energy utilization	VPP, smart energy systems, etc.	Other (Reduction of CO2 emission associated with own activities)	Cryogenic power generation in the city gas production process, Cryogenic power generation facilities, energy efficiency renovation work of buildings, etc.
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Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1c	Environmental benefits.	All green projects to which the funds are used should have clear environmental benefits, the effects of which should be assessed by the fundraiser and, where possible, quantitatively demonstrated.	Confirmed Documents <ul style="list-style-type: none"> <li>- framework</li> <li>- Outline of the project</li> </ul> Interviews with stakeholders	Transition projects are projects that contribute to low and decarbonisation, which fall into the three eligible criteria listed in 1b, contributing to the targets under Osaka Gas' Transition Strategy. The environmental benefit is a reduction in CO <sub>2</sub> emissions, which has been quantitatively or qualitatively assessed by Osaka Gas.
1d	Refinancing rate	If all or part of the proceeds are used or may be used for refinancing, the fundraiser will indicate the estimated ratio of the initial investment to the refinancing and, if necessary. Therefore, it is recommended to clarify which investment or project portfolio is subject to refinancing.	Confirmed Documents <ul style="list-style-type: none"> <li>- framework</li> <li>- Allocated funds management table</li> </ul> Interviews with stakeholders	Osaka Gas used all proceeds for both new investment and refinancing for one or more of the eligible projects. DNV has also confirmed that Osaka Gas intends to reveal the estimated amount of the portion of the proceeds used for refinancing through reporting (annual report).



## GBP/GLP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
2a.	Project selection process	<p>Transition Finance fundraisers should provide an overview of the process of qualifying projects for which Transition Finance funding will be used. This includes (but is not limited to):</p> <ul style="list-style-type: none"> <li>• The process by which the fundraiser determines that the project in question is included in the business category of a qualified green project.</li> <li>• Creation of criteria for eligibility of projects for which Transition Finance funding will be used</li> <li>• Environmental sustainability goals</li> </ul>	<p>Confirmed Documents</p> <ul style="list-style-type: none"> <li>- framework</li> <li>- Proposal submitted to obtain permission</li> </ul> <p>Interviews with stakeholders.</p>	<p>DNV confirmed that Osaka Gas has a process document that determines the eligibility of a project to use Transition Finance proceeds, and that this is clearly outlined in the Framework.</p>
2b	Fundraiser's Environmental and Social Governance Framework	<p>In addition to criteria and certifications, the information published by fundraisers regarding the Transition Finance process also considers the quality of performance of the fundraiser's framework and environmental sustainability.</p>	<p>Confirmed Documents</p> <ul style="list-style-type: none"> <li>- framework</li> <li>- Proposal submitted to obtain permission</li> </ul> <p>Interviews with stakeholders.</p>	<p>When selecting transition projects, Osaka Gas took into account compliance with environmental laws, regulations, ordinances and rules, as well as clear environmental benefits such as CO<sub>2</sub> reductions during the entire life cycle or in each process.</p> <p>In the operation and implementation of its projects, Osaka Gas is committed to the conservation of the surrounding environment in all relevant departments.</p> <p>DNV confirmed that the transition projects implemented by Osaka Gas are in line with Osaka Gas' management and environmental policies and consistent with the transition strategy, targets, and pathways.</p>



## GBP/GLP-3 Management of Proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
3a.	Tracking procedure-1	The net proceeds from of Transition Funds should be managed in sub-accounts, included in sub-portfolio, or otherwise tracked. It should also be certified by the fundraiser in a formal internal process related to the fundraiser's investment and financing operations for the Transition Project.	Confirmed Documents <ul style="list-style-type: none"> <li>- framework</li> <li>- Accounting management rules</li> <li>- cash management chart</li> </ul> Interviews with stakeholders.	DNV confirmed that the proceeds relating to the proceeds to be raised through transition finance are traceable in line with Osaka Gas' integrated accounting system, etc., and that the system actually in use and the documentation to be produced exclusively through the assessment are verified and certified accordingly.
3b	Tracking procedure - 2	During the Transition Fund redemption period, the balance of proceeds that is being tracked should be adjusted at regular intervals to match the amount allocated to eligible projects undertaken during that period.	Confirmed Documents <ul style="list-style-type: none"> <li>- framework</li> <li>- Accounting management rules</li> <li>- cash management chart</li> </ul> Interviews with stakeholders.	DNV confirmed that Osaka Gas plans to review the balance of the Transition Finance on a regular basis (at least once a year) during the period between the execution of the Transition Finance and the redemption or repayment of the Transition Finance, including through the integrated accounting system described in 3a and documents produced exclusively for this purpose.
3c	Temporary holding	If no investment or payment has been made in a qualified transition project, the fundraiser should also inform the investor of the possible temporary investment method for the balance of unallocated proceeds.	Confirmed Documents <ul style="list-style-type: none"> <li>- framework</li> <li>- Accounting management rules</li> <li>- cash management chart</li> </ul> Interviews with stakeholders.	DNV confirmed that the verification process through Osaka Gas's integrated accounting system and documents produced exclusively for this purpose is a mechanism that enables the company to recognise the balance of unallocated proceeds on a sequential basis.  DNV confirmed through the assessment that the balance of unallocated proceeds was managed in cash or cash equivalents. DNV also confirmed that the balance of unallocated proceeds will be clarified through the reporting of the allocation status of proceeds.



## GBP/GLP-4 Reporting

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
4a.	Periodical reporting	<p>In addition to reporting on the use of proceeds and the temporary investment of unallocated proceeds, the fundraiser will consider each project at least once a year for projects to which Transition Finance proceeds 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 effects</li> </ul>	<p>Confirmed Documents</p> <ul style="list-style-type: none"> <li>- framework</li> <li>- Reporting proposal</li> </ul>	<p>DNV confirmed that Osaka Gas will carry out transition finance reporting (annual reporting) until the proceeds have been allocated, disclosing information on the allocation status of proceeds, the projects for which the proceeds have been allocated and the environmental benefits. It was confirmed that reporting on environmental benefits will be carried out until the redemption or repayment of the Transition Finance is completed.</p> <p>In addition, DNV confirmed that even after the allocation plan or allocation has been completed, any changes in the transition strategy or pathway, or any major changes in the allocation plan or project implementation status (e.g., suspension of a project that has initiated allocations, significant deferral on an annual basis, sale or retirement) will be reported in a timely manner or in reporting.</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>♦ Allocation amount per qualifying criterion unit eligible for allocation</li> <li>♦ Balance of unallocated proceeds</li> <li>♦ Estimated amount of the portion of the proceeds allocated to refinancing</li> </ul> <p>&lt;Environmental benefits&gt;</p> <ul style="list-style-type: none"> <li>♦ Disclose the outline of the project (including the status of progress, completion, operation, etc.) and the expected environmental benefits, within the scope of confidentiality and to the extent practicable, and taking into account the project characteristics (e.g., 10,000 t-CO<sub>2</sub> /year, etc.).</li> </ul> <p>&lt;Others&gt;</p> <ul style="list-style-type: none"> <li>♦ Efforts to become carbon neutral by 2050 will be reviewed as appropriate in light of policy and technology trends and disclosed where necessary.</li> </ul> <p>The content of the reporting on the transition project carried out in this study is described in the Principle-4. Reporting section of the text.</p>