



## **ANNEX** - SECOND PARTY OPINION

# TOHO GAS CO., LTD. TRANSITION BOND (#1)

Prepared by: DNV Business Assurance Japan K.K.

Location: Kobe, Japan

Date: 21st October 2022

Ref. Nr.: PRJN-432401-2022-ANX-JPN-1

This opinion is prepared based on the Toho Gas Green/Transition Finance Framework Second Party Opinion (hereinafter, "Master SPO") (Ref. Nr.: PRJN-432401-2022-AST-JPN-1 \*21<sup>st</sup> October 2022), which was assessed against to the Toho Gas Green/Transition Finance Framework (hereinafter, "Framework").

\*For more information on the ANNEX - Second Party Opinion, see following DNV website https://www.dnv.jp/news/page-227965 Release of a new evaluation service (Master SPO + ANNEX)



#### **Executive Summary**

DNV Business Assurance Japan K.K. (hereinafter, "DNV") confirmed that the Toho Gas Transition Bond (#1) issued by Toho Gas Co., Ltd. (hereinafter, "Toho Gas"), meets the various principles and guidelines requirements for such bond issuance and is planned to be issued and managed through appropriate internal processes, based on the Framework<sup>\*1</sup> which has been assessed its eligibility<sup>\*2</sup>.

- \*1: Toho Gas Green/Transition Finance Framework
- \*2: Toho Gas Green/Transition Finance Framework Second Party Opinion

Table-1 shows an outline of the Toho Gas Transition Bond (#1) and ANNEX - Second Party Opinion. The additional items to be assessed in the ANNEX - Second Party Opinion are Element-1 (Use of Proceeds) and Element-4 (Reporting) which are under the bond with specific use of proceeds (response to the four elements). The conformances against to the criteria for the other elements has already been assessed its eligibility in accordance with Framework.

Table - 1 Toho Gas Transition Bond (#1) ANNEX - Second Party Opinion

| Target finance   | Toho Gas Transition Bond (#1)  |  |  |  |  |
|--|--|--|--|--|--|
| Target organization  | Toho Gas Co., Ltd.   |  |  |  |  |
| Target<br>framework  | Toho Gas Green/Transition  | Toho Gas Green/Transition Finance Framework  |  |  |  |
| Targeted external review                                       |  | Toho Gas Green/Transition Finance Framework Second Party Opinion  Ref. Nr.: PRJN-432401-2022-AST-JPN-1 Issued on 21 <sup>st</sup> October 2022 |  |  |  |
| Target criteria  | Criteria for Climate Transiti - Climate Transition Fir - Basic Guidelines on C                                 | CMA, 2020)<br>inance (FSA, METI, and MoE, 2021)  |  |  |  |
| rarget chteria   | Criteria for the use of proceeds bond - Green Bond Principles (ICMA, 2021) - Green Bond Guidelines (MoE, 2022) |  |  |  |  |
|  | Disclosure element-1 strategy and governa  | •  | - Confirmed reliance on Framework  |  |  |
| Climate Transition<br>Finance (response                        |  | (Environmental   | - Confirmed reliance on Framework  |  |  |
| the four disclosure elements)                                  | e Disclosure element-3 strategy)   | (Science-based   | - Confirmed reliance on Framework  |  |  |
|  | Disclosure element-4 transparency)   | (Implementation  | - Confirmed reliance on Framework  |  |  |
| Bonds with specificuse of proceeds (response to the felements) | Element-1  | assessmen • Building Aichi)  | reliance on Framework. Additional t was implemented as follows: a clean energy production base (Chita, ion of NAS batteries (Tsu, Mie) |  |  |





| 10110  | das co., Eta. Transition Bona (#1) Arrive.  |
|--|---|
|  | <ul> <li>Offshore wind power business in Taiwan (in the waters off Miaoli, Taiwan)</li> </ul>   |
| Element-2 (Process for project evaluation and selection) | - Confirmed reliance on Framework   |
| Element-3<br>(Management of<br>proceeds)                 | - Confirmed reliance on Framework   |
| Element-4<br>(Reporting)                                 | <ul> <li>Confirmed reliance on Framework. Additional review was carried out as follows:</li> <li>Allocation of proceeds: Items and categories</li> <li>Environmental benefits: Annual CO<sub>2</sub> reduction (t-CO<sub>2</sub>/year), etc.</li> </ul> |

DNV, as an external reviewer, evaluated the eligibility of the use of proceeds and reporting for the Toho Gas Transition Bond (#1), based on an assessment of the Framework and other relevant documents and information provided by Toho Gas. DNV also confirmed that there were no changes to the other items (in accordance with the Framework).





#### Contents

| Executive Summary   | 2  |
|---|----|
| I. Scope and Objectives                                       | 5  |
| ${\rm I\hspace{1em}I}$ . Responsibilities of Toho Gas and DNV | 7  |
| Ⅲ. Basis of DNV's Opinion                                     | 7  |
| IV. Work Undertaken   | 9  |
| V. Findings and DNV's Opinion                                 | 10 |
| VI. Assessment Conclusion                                     | 19 |
| Schedule-1 Toho Gas Transition Bond (#1) Eligible Projects    | 21 |

#### Revision history

| Date of issue                 | Remarks   |
|-------------------------------|---|
| 21 <sup>st</sup> October 2022 | Prepared and issued as Toho Gas Transition Bond (#1) ANNEX - Second Party |
| 21 October 2022               | Opinion   |

#### Disclaimer

Our assessment relies on the premise that the data and information provided by Issuer to us as part of our review procedures have been provided in good faith. Because of the selected nature (sampling) and other inherent limitation of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities, possibly significant, may not have been detected. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied as per Scope of work. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Statement.

#### Statement of Competence and Independence

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2011 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV Code of Conduct1 during the assessment and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of statements or data included in the Framework except for this Statement. DNV maintains complete impartiality toward stakeholders interviewed during the assessment process.

<sup>&</sup>lt;sup>1</sup> DNV Code of Conduct is available from DNV website (www.DNV.com)



#### I. Scope and Objectives

DNV has been commissioned by Toho Gas to provide a pre-issuance assessment on the Transition Bond. Our objective has been to implement an assessment on whether Toho Gas meet the criteria established on CTFH·CTFBG and GBP·GBGLs, which are the criteria for bonds with the specific use of proceeds, to provide ANNEX - Second Party Opinion regarding the eligibility of the Transition Bond.

DNV, as an independent external reviewer, has identified no real or perceived conflict of interest associated with the delivery of this ANNEX - Second Party Opinion for Toho Gas.

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

| (1) | Scope | of | review* |
|-----|-------|----|---------|
|-----|-------|----|---------|

| (-)   | scope of review                               |                                      |                        |  |
|---|---|--------------------------------------|------------------------|--|
| The r                                       | review assessed the following eler            | ments and co                         | onfirmed               | their alignment with the gist of GBP/GLP:  |
| ☐ Use of proceeds ☐ Process for project eva |   | for project evaluation and selection |                        |  |
|   | Management of proceeds                        | $\boxtimes$                          | Reporti                | ng   |
|   | The scope of review is to be applic proceeds. | ed as a part                         | of the ev              | aluation of the transition finance with use of   |
| 1   | and Selection", and "Management               | of Proceeds<br>o Gas that th         | " and has<br>nere were | of CTFH/CTFBG, "Process for Project Evaluation sexposed our opinion below. DNV also confirmed no changes in the Transition Bond to be red. |
|   | "Toho Gas Green/Transition                    | on Finance F                         | ramewor                | k Second Party Opinion"  |
|   |   | Ref. Nr.:                            | PRJN-43                | 2401-2022-AST-JPN Issued on 21 <sup>st</sup> October 2022  |
| (2)   | Role(s) of review provider                    |                                      |                        |  |
| $\boxtimes$                                 | Second party opinion                          |                                      |                        | Certification  |
|   | Verification                                  |                                      |                        | Ratings  |
|   | Other (please specify):                       |                                      |                        |  |



#### (3) Standards/guidelines to be applied

| No. | Standards/guidelines                                      | Scheme owner  |
|-----|---|---|
| 1.  | Climate Transition Finance Handbook (CTFH)*1              | International Capital Market Association (ICMA), 2020   |
| 2.  | Basic Guidelines on Climate Transition Finance (CTFBG) *1 | Financial Services Agency, Ministry of<br>Economy, Trade and Industry, Ministry of<br>the Environment, 2021 |
| 3.  | Green Bond Principles (GBP) *2                            | International Capital Market Association (ICMA), 2021   |
| 4.  | Green Bond Guidelines (GBGLs) *2                          | Ministry of the Environment, 2022   |

<sup>\*1</sup> 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).

<sup>\*2</sup> 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).



#### **II.** Responsibilities of Toho Gas and DNV

Toho Gas has provided the information and data used by DNV during the delivery of this review. DNV's ANNEX - Second Party Opinion represents an independent opinion and is intended to inform interested stakeholders in the Toho Gas Transition Bond (#1) 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 Toho Gas. DNV is not responsible for any aspect of the nominated projects and 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 Toho Gas's management and used as a basis for this assessment were not correct or complete.

#### **III.** Basis of DNV's Opinion

To provide a more flexible ANNEX - Second Party Opinion for the issuer, Toho Gas, DNV identified the key assessment targets and carried out assessments in accordance with its procedures.

DNV, as an independent external reviewer, provides ANNEX - Second Party Opinion according to the protocol.

Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle behind the Climate Transition Finance with a use of proceeds bond as the basis for the opinion are as follows:

"provide an investment opportunity with transparent sustainability credentials"

"enable capital-raising and investment for new and existing projects with environmental benefits"

As per our Protocol, the criteria against which the Toho Gas Transition Bond (#1) has been grouped into common elements bellow.

The additional assessment for this ANNEX - Second Party Opinion covers Element 1 and Element 4 out of the four common elements of (2) GBP/GBGLs.

Part of (1) and (2) has already been assessed for eligibility. Detailed results of the eligibility assessment for such parts of (1) and (2) can be found in the "Toho Gas Green/Transition Finance Framework Second Party Opinion" (Ref. Nr.: PRJN-432401-2022-AST-JPN-1, issued on 21<sup>st</sup> October 2022).



#### (1) Four common elements of CTFH and CTFBG (disclosure elements)

#### Principle One: Issuer's climate transition strategy and governance

The financing purpose should be for enabling an issuer's climate change strategy.

#### Principle Two: Business model environmental materiality

The planned climate transition trajectory should be relevant to the environmentally-material parts of the issuer's business model.

# Principle Three: Climate transition strategy to be science-based including targets and pathways

Issuer's climate strategy should reference science-based targets and transition pathways.

#### **Principle Four: Implementation transparency**

Market communication in connection with the offer of a financing instrument which has the aim of funding the issuer's climate transition strategy should also provide transparency of the underlying investment program.

#### (2) Four elements of GBP/GBGLs

# Principle One: Use of Proceeds \*Subject to additional assessment of ANNEX - Second Party Opinion

The Use of Proceeds criteria are guided by the requirement that an issuer of a transition finance with specific use of proceeds must use the funds raised to bond 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 an issuer of a transition finance should outline the process it follows when determining eligibility of an investment using the proceeds from transition finance and outline any impact objectives it will consider.

#### **Principle Three: Management of Proceeds**

The Management of Proceeds criteria are guided by the requirements that a transition finance 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** \*Subject to additional assessment of ANNEX - Second Party Opinion

The Reporting criteria are guided by the recommendation that at least 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.



#### IV. 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 includes:

#### i. Pre-funding assessment (ANNEX - Second Party Opinion)

- Assessment of additional documentary evidence provided by Toho Gas on the Toho Gas Green/Transition Finance and supplemented assessment by a comprehensive desktop research. These checks refer to current assessment best practice and standards methodologies;
- Discussions with Toho Gas, and review of relevant documentation;
- Documentation of findings against each element of the criteria to be additionally assessed.

#### ii. Post-funding assessment (periodic review) (\*not included in this report)

- Interviews with fundraiser managers and review of relevant documentation;
- Site surveys and inspections (if required);
- Documentation of post-issuance assessment results.



#### V. Findings and DNV's Opinion

DNV's findings and opinion are as described below.

#### GBP/GBGLs-1. Use of Proceeds

Toho Gas has defined the criteria applied to eligible projects as transition projects which meet Transition Strategy and related handbook, principle, and guidelines (CTFH and CTFBG).

The proceeds of the Toho Gas Transition Bond (#1) will be used for the following three projects. Please see Schedule-1 for details.

All three projects are eligible projects that are aligned with either or all of the Technology Roadmap for "Transition Finance" in Gas Sector (METI, February 2022), the "Transition Roadmap for Power Sector" (Agency for Natural Resources and Energy, February 2022) and the Action Plan of the Carbon Neutral Challenge 2050 by the Japan Gas Association (The Japan Gas Association, November 2020), in addition to the Toho Gas Green/Transition Finance Framework.

The amount of proceeds of the Toho Gas Transition Bond (#1) will be JPY 10 billion. DNV confirmed at the time of this assessment that the proceeds will be allocated for new investments and refinancing. The actual allocation results will be reported on an annual basis in accordance with GBP/GBGLs-4.Reporting.



#### Project 1: Building a clean energy production base

- Building a clean energy production base is a project aims to achieve Toho Gas'
  Transition Strategy by conducting verification testing of methanation and constructing a hydrogen production plant in Chita, Aichi.
- The methanation verification testing will produce synthetic methane from biogasderived CO<sub>2</sub> generated from the treatment of sewage sludge at the Chita City Nanbu Purification Center and hydrogen produced using electricity from LNG cryogenic power generation, etc., which will be used as a raw material for city gas. This is expected to be the first time in Japan that synthetic methane from methanation will be used as a raw material for city gas. Toho Gas plans a large-scale social implementation of methanation facilities in the future, with the aim of decarbonizing the gas itself.
- The hydrogen production plant using natural gas as a raw material will be built on the premises of Toho Gas' Chita-Midorihama Factory, with the aim of creating a hydrogen supply chain that contributes to carbon neutrality. The construction will be completed and hydrogen supply will start by 2024, after which the scale of the plant will be expanded in line with the growing demand for hydrogen in the region. The CO<sub>2</sub> generated during hydrogen production will be offset for the time being through the use of credits, with a view to capture and utilization in the future. The Chita-Midorihama Factory is also aiming to build a foundation for the spread and expansion of hydrogen by forming alliances with other companies that have expertise and knowhow in the fields of hydrogen transport and consumption, and in the future, to use the Chita-Midorihama Factory as a receiving terminal for imported hydrogen from overseas.
- In view of the above, building a clean energy production base is a transition project that is aligned with the "Toho Gas Group 2050 Carbon Neutrality Initiative", the Technology Roadmap for "Transition Finance" in Gas Sector (METI) and the Carbon Neutral Challenge 2050 (The Japan Gas Association).



Toho Gas Co., Ltd. Transition Bond (#1) ANNEX - Second Party Opinion **Chita City Nanbu Chita LNG Terminal Purification Methanation reactor** Center Methane manufactured: 5 Nm3/h Biogas refiner  $CO_2$ Synthetic methane Electricity (cryogenic power generation, etc.) Hydrogen Biogas Hydrogen production equipment before refining Hydrogen manufactured: 20 Nm<sup>3</sup>/h Raw material for city gas (Not included in biogas\* Utilization verification testing) Gas pipe To customers

Figure-1 Image of methanation verification

Table-1 Outlines of Project – Building a clean energy production base

| Project name:  | Building a clean energy production base              |   |  |  |
|--|--|---|--|--|
| Estimated allocation:  | Approx. JPY 2.5 billion                              |   |  |  |
| Content:   | Methanation verification testing                     | Hydrogen production plant                                   |  |  |
| Location:  | Chita City, Aichi Prefecture (Chita<br>LNG Terminal) | Chita City, Aichi Prefecture (Chita-<br>Midorihama Factory) |  |  |
| Start of operation:  | FY2023 - FY2026 (planned)                            | 2024 (planned)  |  |  |
| Estimated Quantitative reduction effects are environmental under consideration as it is still in benefits: the verification phase. |  | Hydrogen production capacity 1.7 t/day                      |  |  |



#### **Project 2: Installation of NAS batteries**

- Installation of NAS batteries is a project that is the first case in the three prefectures in Tokai area where storage batteries are being installed on the former site of the Tsu LNG Station owned by Toho Gas, with the aim of contributing to the promotion of renewable energy. The storage batteries to be installed are NAS batteries manufactured by NGK Insulators, Ltd. with a capacity of 69,600 kWh and an output of 11,400 kW.
- By introducing storage batteries using subsidies under the "Supporting Project for the Installation of NAS Batteries, etc. to Accelerate the Introduction of Renewable Energy" by the Agency for Natural Resources and Energy, the project aims to promote the spread of renewable energy and contribute to achieving carbon neutrality.
- In order to expand the introduction of renewable energy in the future, it will be an urgent task to ensure the effective use of surplus renewable energies and to secure the power to adjust to fluctuations. The project aims to indirectly contribute to the reduction of CO<sub>2</sub> of the entire society by utilizing NAS batteries, absorbing surplus renewable energy and providing adjusting power through trading on various electricity markets.
- In view of the above, installation of NAS batteries is a transition project that is aligned with the "Toho Gas Group 2050 Carbon Neutrality Initiative" and the "Transition Roadmap for Power Sector" (Agency for Natural Resources and Energy).



Figure-2 Appearance of a NAS battery



## Table-2 Outlines of Project – Installation of NAS batteries

| Project name:                     | Installation of NAS batteries                             |
|-----------------------------------|---|
| Estimated allocation:             | Approx. JPY 2.5 billion                                   |
| Location:                         | Tsu City, Mie Prefecture (former site of Tsu LNG Station) |
| Output:                           | 11,400 kW   |
| Capacity:                         | 69,600 kWh  |
| Start of operation:               | FY2025 (planned)  |
| Estimated environmental benefits: | Output: 11,400 kW, Capacity: 69,600 kWh                   |



#### **Project 3: Offshore wind power business in Taiwan (Formosa 1)**

- Formosa 1 is a project classified as offshore wind power and is a green project that meets the technical criteria of the referenced Climate Bond Standard.
- Formosa 1 is the first commercial-scale offshore wind farm in Taiwan, which has started selling electricity to Taiwan Power Company for 20 years under the feed-in tariff (FIT) system. Toho Gas, together with Mitsui O.S.K. Lines, Ltd. and Hokuriku Electric Power Company will participate in the offshore wind power project by acquiring shares in the holding company of the project through a special purpose company.
- Through due diligence when participating in the project, Toho Gas has assessed the major risks arising from climate change, impacts on stakeholders, the design and implementation of the adaptation plan, the maintenance system and impacts on ecosystem services to confirm that there are no issues.
- In its Green/Transition Finance Framework, Toho Gas has identified offshore wind power and other renewable energies as key initiatives (Green/Transition Eligible Criteria) towards the "Toho Gas Group 2050 Carbon Neutrality Initiative".
- Toho Gas has a target of the volume of renewable energy sources handled in 2030 of 500,000 kW, and Formosa 1 will directly contribute to achieving this target. In addition, it is expected that Toho Gas will contribute to the future development of the offshore wind power project in Japan by accumulating knowledge on offshore wind power generation through its participation in Formosa 1.
- The expected annual CO<sub>2</sub> reduction is estimated to be approximately 27,000 t-CO<sub>2</sub>/year. (The reduction amount is proportionally distributed according to their share, as it is a joint project of several companies.)



Figure-3 Offshore wind power business in Taiwan (Formosa 1)



### Table-3 Outlines of Project - Offshore wind power business in Taiwan (Formosa 1)

| Project name:                     | Offshore wind power business in Taiwan (Formosa 1)                    |
|-----------------------------------|---|
| Estimated allocation:             | Approx. JPY 5 billion   |
| Location:                         | In the waters of Miaoli, Taiwan                                       |
| Installed capacity:               | Approx. 128,000 kW  |
| Number of turbines:               | 22 (bottom-mounted)   |
| Start of operation:               | April 2017: Phase 1 (8,000 kW)<br>December 2019: Phase 2 (120,000 kW) |
| Estimated environmental benefits: | Approx. 27,000 t-CO <sub>2</sub> /year                                |



#### GBP/GBGLs-4. Reporting

#### <Allocation status>

DNV confirmed that the following items relating to the allocation status of the proceeds will be disclosed on the issuer's website until the proceeds of the Toho Gas Transition Bond (#1) have been fully allocated. DNV also confirmed that, even after allocation have been completed, Toho Gas plans to promptly disclose on its website any material changes in the project for which the proceeds are to be used, and information of unallocated proceeds.

- Allocated amount
- Estimated amount of unallocated proceeds, estimated time of allocation
- Estimated amount or percentage of the portion of the proceeds allocated as refinancing

#### <Environmental benefits>

DNV confirmed that during the period between the implementation and redemption of the Toho Gas Transition Bond (#1), Toho Gas plans to disclose on its website, as long as reasonably practicable, any or all of the following items relating to environmental benefits.

- Outlines of each project
- Progress in R&D, capital investment, etc.
- Installed capacity
- Annual power generation
- Annual CO<sub>2</sub> emission reductions from each project (t-CO<sub>2</sub>/year)



| Use o       | f Proceeds reporting:                                  |             |  |
|-------------|--|-------------|--|
| $\boxtimes$ | Project-by-project                                     |             | On a project portfolio basis   |
|             | Linkage to individual bond(s)                          |             | Other (please specify):  |
|             | Information reported:                                  |             |  |
|             | ⋈ Allocated amounts                                    |             | GB refinanced share of total investment                                |
|             | ☐ Other (please specify):                              |             |  |
|             | Frequency:   |             |  |
|             | ⊠ Annual   |             | Semi-annual  |
|             | ☐ Other (please specify):                              |             |  |
|             |  |             |  |
| _           |  |             |  |
| ımpa        | ct reporting (Environmental imp                        | act):       |  |
|             | Project-by-project                                     | $\boxtimes$ | On a project portfolio basis   |
|             | Linkage to individual bond(s)                          |             | Other (please specify):  |
|             | Frequency:   |             |  |
|             | Annual   |             | ☐ Semi-annual  |
|             | ☐ Other (please specify):                              |             |  |
|             | Information reported (estimated                        | d or ex-po  | ost):  |
|             | ☐ GHG emissions/savings                                | •           | , □ Energy savings   |
|             | ☐ Other ESG indicators (please                         | e specify): | Outlines of project, installed capacity, annual power generation, etc. |
| Means       | s of disclosure  |             | ,  |
|             | Information published in financial                     |             | Information published in sustainability                                |
|             | report (Integrated Report)                             |             | report   |
|             | Information published in ad hoc                        | $\boxtimes$ | Other (please specify): on Toho Gas                                    |
|             | documents  |             | website  |
|             | Reporting reviewed (if yes, please sp external review) | ecify whicl | n parts of the reporting are subject to                                |



#### **VI.** Assessment Conclusion

On the basis of the information provided by Toho Gas and the work undertaken, it is DNV's opinion that the Toho Gas Transition Bond (#1) meets the criteria established in the Protocol, and that it is aligned with the following stated definition or purpose of the bonds that specify the use of proceeds within the CTFH/CTFBG and GBP/GBGLs:

"provide an investment opportunity with transparent sustainability credentials"

"enable capital-raising and investment for new and existing projects with environmental benefits"

DNV Business Assurance Japan K.K.

21st October 2022

**Mark Robinson** 

Manager, Sustainability Services DNV Business Assurance, Australia

M konedone.

Naoki Maeda

Managing Director

DNV Business Assurance Japan K.K.

Moh.

**Masato Kanedome** 

Project Leader

DNV Business Assurance Japan K.K.

Jun Chokai

Assessor

DNV Business Assurance Japan K.K.



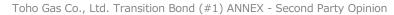
#### **About DNV**

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 Toho Gas Transition Bond (#1) Eligible Projects

| Eligible Criteria (partly extracted from the framework) |  | Project Overview   |  |   |  |
|---|--|--|--|---|--|
| Gas   | Decarbonization of gas itself                                  | Methanation  | R&D or capital investment in the practical implementation of methanation technology  | Methanation verification testing and hydrogen production plant *New allocations planned <estimated environmental<="" td=""><td>Project name: Building a clean energy production base Estimated allocation: Approx. JPY 2.5 billion</td></estimated> | Project name: Building a clean energy production base Estimated allocation: Approx. JPY 2.5 billion  |
| Hydrogen  | Supply chain creation  | Hydrogen production,<br>CCUS   | R&D or capital investment in hydrogen production by reforming natural gas, etc. and carbon recycling   | benefits>  Methanation verification testing:  Quantitative reduction effects are under consideration as it is still in the verification phase.  Hydrogen production plant:  Hydrogen production capacity  1.7 t/day                                 | Location: Chita, Aichi (Chita LNG Terminal and Chita-Midorihama Factory)  Period for methanation verification testing: FY2023 - FY2026 (planned)  Start of operation of the hydrogen production plant: FY2024 (planned)  gen production plant: gen production capacity |
| Electricity   | Reductions of carbon and decarbonization at customer locations | Distributed energy<br>system, renewable<br>energy, clean<br>transportation | R&D or capital investment in encouraging the popularization of diverse distributed energy sources, including solar power generation, storage batteries, electric automobiles, etc. and | Installation of NAS batteries *New allocations planned <estimated benefits="" environmental=""> Output 11,400 kW Capacity 69,600 kWh</estimated>  | Project name: Installation of NAS batteries Estimated allocation: Approx. JPY 2.5 billion Location: Tsu, Mie Battery type: NAS battery Output: 11,400 kW Capacity: 69,600 kWh Start of operation: FY2025 (planned)   |



|  |   |                  | integrating in<br>the controlling<br>these utilizing<br>digital<br>technology   |   |  |
|--|---|------------------|---|---|--|
|  | Decarbonization<br>of electrical<br>power sources | Renewable energy | Capital investment / investment and lending for the development of renewable energy sources such as solar, biomass, wind (including offshore wind) and small hydropower | Offshore wind power business in Taiwan *Refinancing planned <estimated benefits="" environmental=""> Approx. 27,000 t-CO<sub>2</sub>/year</estimated> | Project name: Offshore wind power business in Taiwan (Formosa 1) Estimated allocation: Approx. JPY 5 billion Location: In the waters of Miaoli, Taiwan Installed capacity: 128,000 kW Number of turbines: 22 (bottom-mounted) Start of operation: April 2017 (Phase 1) December 2019 (Phase 2) |