



## SECOND PARTY OPINION

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### The Government of Japan

### Climate Transition Bond Framework

Prepared by: DNV Business Assurance Japan K.K.

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### Revision history

Revision number	Date of Issue	Remarks
0	7 November 2023	Initial

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

## Executive Summary

### Environmental initiatives of the Government of Japan:

The Government of Japan regards the actions against climate change, which includes extreme weather on a global scale and increasing large-scale natural disasters, as a challenge common to all humankind and has made an international commitment to reduce GHG emissions by 46% in FY2030 (compared to FY2013) and to take up the challenge of achieving a further 50% reduction as well as carbon neutrality<sup>\*1</sup> by 2050.

\*1 This means subtracting the “absorptions”<sup>\*</sup> of CO<sub>2</sub> and other greenhouse gases through afforestation, forest management, etc. from the “emissions” to bring the total to virtually zero. <sup>\*</sup>Artificial amount (from the Ministry of the Environment’s Decarbonization Portal)

The Government of Japan has positioned its actions against climate change as Green Transformation (hereinafter, “GX”), a shift in industrial and social structures from dependence on fossil energy since the Industrial Revolution to a focus on clean energy. The Government and private sector are now cooperating to achieve decarbonization. In particular, the Government of Japan is working towards an early transition to a decarbonized society by supporting investments that lead to decarbonization in the power generation, industrial, transport and household sectors.

### Issuance of Climate Transition Bond:

In pursuing these environmental initiatives, the Government of Japan (hereinafter, the “Issuer”), as the issuer of the Green Transformation Economy Transition Bond and the Climate Transition Bond (hereinafter, the “GX Economy Transition Bonds” or “Climate Transition Bond”), intends to create new demand and market in the decarbonization sector, including stable supplies of clean energy by making maximum use of decarbonization-related technologies in Japan, in order to strengthen Japan's industrial competitiveness and achieve economic growth.

The Issuer has been working with international sustainable finance initiatives. Specifically, the Issuer has developed various guidelines (e.g., Green Bond Guidelines, Basic Guidelines on Climate Transition Finance) and provided various types of support to develop sustainable finance in Japan, utilizing international sustainable finance principles, etc. As a result, the private sector’s initiatives in sustainable finance are steadily expanding, and the desired outcomes are being achieved.

The Issuer plans to issue a Climate Transition Bond to promote initiatives to meet the international commitments described above. The proceeds from the Climate Transition Bond are planned to be used mainly for the private sector’s projects related to new technologies and businesses that will lead to innovations contributing to decarbonization. The Issuer has established the Climate Transition Bond Framework (hereinafter, the “Framework”) to ensure that the Climate Transition Bond is issued in a manner consistent with internationally recognized principles and guidelines.

### External review by an independent evaluation body:

DNV Business Assurance Japan K.K. (hereinafter, “DNV”) assessed the eligibility of the Framework as an independent third-party evaluation body to provide an external review recommended in the following principles and guidelines. The relevant books recommended to be referenced in each framework were cited as appropriate to provide the eligibility assessment.

- Climate Transition Finance Handbook (CTFH), International Capital Market Association (ICMA), 2023
- Basic Guidelines on Climate Transition Finance (CTFBG), Financial Services Agency, Ministry of Economy, Trade and Industry, Ministry of the Environment, 2021
- Green Bond Principles (GBP), International Capital Market Association (ICMA), 2021
- Green Bond Guidelines (GBGLs), Ministry of the Environment, 2022

A summary of the eligibility assessment against the common elements set out in the above principles and guidelines, etc., is presented below separately for CTF (CTFH/CTFBG) and GBP (GBP/GBGLs Transition Bonds with use of proceeds).

### <CTF eligibility assessment results>

DNV has identified the following based on the materials and information provided by the Issuer. CTF-1 to CTF-4 below are the findings and DNV’s opinion on the four common elements of CTFH and CTFBG (disclosure elements) required by the Issuer’s transition strategy, etc.

#### CTF-1. Issuer’s Climate Transition Strategy and Governance:

##### **Climate Transition Strategy:**

The Issuer’s Climate Transition Strategy (hereinafter, the “Transition Strategy”) is consistent with the Paris Agreement<sup>\*2</sup>, which sets a long-term goal of carbon neutrality in 2050 and a mid-term goal of a 46% reduction in GHG emissions in FY2030 (compared to FY2013), and is scientifically based. The Transition Strategy has been established based on the revisions etc. of the Plan for Global Warming Countermeasures<sup>\*3</sup> formulated in October 2021, Japan’s NDC (Nationally Determined Contribution)<sup>\*4</sup>, the Strategic Energy Plan<sup>\*5</sup> and the long-term strategy as a growth strategy based on the Paris Agreement<sup>\*6</sup>, etc. and has specific actions to realize the above-mentioned long-term and mid-term goals. In addition, the “Basic Policy for the Realization of GX” was formulated in 2023 as a roadmap for the next 10 years, outlining initiatives to strengthen Japan’s industrial competitiveness and achieve economic growth. These initiatives contribute to the SDGs<sup>\*7</sup> and a Just Transition<sup>\*8</sup>.

##### **Governance:**

The above plans and strategies, which form the basis for strategy implementation, will be updated annually or through regular follow-up and revision. In particular, in the event of major changes to the Plan for Global Warming Countermeasures, which is part of the fundamental elements of the strategy, or to the Strategic Energy Plan, the Transition Strategy and initiatives for its realization will be reviewed based on discussions between



the GX Implementation Council chaired by the Prime Minister, relevant ministers, and experts, etc.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-1 that it “should be directed towards achieving a GHG reduction strategy in line with the goals of the Paris Agreement.”

- \*2 New international framework for GHG emission reduction etc. since 2020, adopted at the 2015 United Nations Climate Change Conference (COP21) and entered into force in 2016, replacing the Kyoto Protocol; [https://www.mofa.go.jp/mofaj/ic/ch/page1w\\_000119.html](https://www.mofa.go.jp/mofaj/ic/ch/page1w_000119.html)
- \*3 The Government’s comprehensive plan based on the Act on Promotion of Global Warming Countermeasures; <https://www.env.go.jp/earth/ondanka/domestic.html>
- \*4 GHG emission reduction targets set by each country under the Paris Agreement, which must be submitted and updated every five years; <https://www.env.go.jp/earth/earth/ondanka/ndc.html>
- \*5 Formulated by the Government in accordance with the Basic Act on Energy Policy to set the basic direction of energy policy; <https://www.enecho.meti.go.jp/category/others/index.html>
- \*6 The strategy is developed by the Government as a long-term low emission development strategy based on the provisions of the Paris Agreement (Article 4.19) and presents the basic approach, vision, etc. towards carbon neutrality in 2050; <https://www.env.go.jp/earth/ondanka/keikaku/chokisenryaku.html>
- \*7 Sustainable Development Goals (SDGs) is an international goal consisting of 17 goals and 169 targets to be achieved by 2030, when a pledge was made to “leave no one behind” on the planet; <https://www.mofa.go.jp/mofaj/gaiko/oda/sdgs/about/index.html>
- \*8 As defined by ICMA, “Just Transition” aims to ensure that the substantial benefits of the transition to a green economy are widely shared, while supporting those who stand to suffer economic disadvantages (including countries, regions, industries, communities, workers and consumers). The concept is tied to the United Nation’s SDGs; [https://www.fsa.go.jp/news/r2/singi/20210507\\_2/03.pdf](https://www.fsa.go.jp/news/r2/singi/20210507_2/03.pdf)

## CTF-2. Business model environmental materiality:

### **Environmental materiality:**

The Issuer recognizes that the manufacturing sector accounts for approximately 20% of Japan's GDP and is a key sector of the economy, that Japan's energy self-sufficiency rate is 13.3% (FY2021) and the country is dependent on energy resources from overseas, and that changes in the international energy situation since 2022 is making energy security challenges in business activities and people's lives more apparent.

In this context, DNV believes that the GX can be positioned as an important industrial and energy policy to shift the industrial and social structure to focus on clean energy, making maximum use of decarbonization-related technologies owned by Japanese companies, in order to achieve a stable energy supply, promote decarbonization and economic growth.

### **Scenario considerations:**

In advancing the GX, the Issuer classifies the sectors mainly related to GHG<sup>\*9</sup> emissions into "energy supply side (energy conversion sectors such as power generation)" and "energy demand side (household and industrial sectors)." The Issuer has further developed GHG (CO<sub>2</sub>) emission reduction image etc. for major emission sectors (11 sectors in total, including power generation, industrial and transport sectors) by making the roadmap for the promotion of transition finance<sup>\*10</sup> consistent with various governmental measures and scenarios (e.g., IEA<sup>\*11</sup>, IPCC<sup>\*12</sup>, SBTi<sup>\*13</sup>).

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-2 that "the transition strategy should relate to the environmentally material aspects of the issuer's business model and take into account several future scenarios that could influence the decision on current materiality."

\*9 GHG: Green House Gas

\*10 A specific direction of transition towards achieving carbon neutrality in 2050 for GHG and other emitting industries, developed by the Ministry of Economy, Trade and Industry;  
[https://www.meti.go.jp/english/policy/energy\\_environment/transition\\_finance/index.html](https://www.meti.go.jp/english/policy/energy_environment/transition_finance/index.html)

\*11 The International Energy Agency (IEA) was established in 1974 as an autonomous agency within the OECD;  
<https://www.iea.org/>

\*12 IPCC: Intergovernmental Panel on Climate Change; <https://www.ipcc.ch/>

\*13 SBTi: Science Based Targets initiative



### CTF-3. Climate transition strategy to be 'science-based' including targets and pathways:

#### **Science-based strategies, targets and pathways:**

The Issuer's Transition Strategy is defined by scientifically-based CO<sub>2</sub> reduction targets and pathways consistent with the Paris Agreement. Specifically, the Issuer has set targets and pathways based on the strategies and plans described in CTF-1, and index and quantify mid-term (FY2030) and long-term (FY2050) goals for (total) GHG emission reduction in Japan, together with the base year (FY2013). In particular, the means to achieve the mid-term (FY2030) goal are published for each industrial sector. These targets, pathways and means of achieving the targets have been discussed through a number of meetings consisting of experts and academics, and the results have been disclosed in detail in official documentation and information.

In addition, the Government is also working on a strategy to invest more than JPY 150 trillion to achieve the GX targets by incentivizing GX promotion through the future introduction of carbon pricing<sup>\*14</sup> and through blended finance that combines public and private investments, including the GX Economy Transition Bonds.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-3 that "the issuer's transition strategy should be based on science-based targets and pathways towards transition."

\*14 A policy instrument putting a price on carbon in order to change the behavior of emitters. Broadly speaking, there are five typologies: carbon taxes, domestic emissions trading, credit trading, market mechanisms by international organizations and internal carbon pricing; <https://www.env.go.jp/earth/ondanka/cp/index.html>

#### **CTF-4. Implementation transparency:**

##### **Investment plan:**

The Issuer discloses the basic investment program for the implementation of the Transition Strategy. Specifically, the investment plan is to provide upfront investment support<sup>\*15</sup> (GX Economy Transition Bonds) in the amount of approximately JPY 20 trillion as government support over the next 10 years in order to lead to an overall public-private investment of over JPY 150 trillion over the same period starting in 2023. The main investment destinations of the Climate Transition Bond are the “promotion of non-fossil energy (JPY 6-8 trillion),” “industrial restructuring and radical energy conservation in a combination of supply and demand (approximately JPY 9-12 trillion),” and “resource recycling and carbon fixation technologies (approximately JPY 2-4 trillion).” These investment programs are disclosed in the Framework, the “Basic Policy for the Realization of GX,” etc. as necessary information for dialogue with the market.

The investment destinations of the GX Economy Transition Bonds (approximately JPY 20 trillion) include subsidies, investments and debt guarantees according to the business risk (technical risk, market risk, etc.) of each field/technology from research and development to social implementation for green projects classified under the GBP/GBGLs (e.g., renewable energy sector, energy conservation (energy efficiency) sector and activities that should be undertaken at present for future carbon neutrality (e.g., initiatives for phasing out fossil fuel use, the utilization of nuclear power).

##### **Just transition, mitigation of negative impact, avoidance of lock-in:**

The Issuer plans to ensure that Just Transition, mitigation of negative impacts<sup>\*16</sup> and avoidance of lock-in<sup>\*17</sup> are in place in the “Basic Policy for the Realization of GX” and the selection process of investment destinations (eligible projects). Specifically, the policy for Just Transition is set out in the “Basic Policy for the Realization of GX” as “Promoting GX for entire society (section 5).” In addition, with regard to mitigation of negative impacts and avoidance of lock-in, it is to be confirmed in the selection process of investment destinations (eligible projects) that they do not fall under the pre-defined exclusion criteria and that they are consistent with the GHG reduction roadmap.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-4 that “the dialogue with the market on the provision of green, sustainability and sustainability-linked finance intended to finance the issuer's transition strategy should, as far as possible, also have transparency with regard to the investment program including capital and operating costs.”

\*15 This is the very positioning of the “GX Economy Transition Bonds,” which are designed to boost private investments in order to realize GX investments over JPY 150 trillion in a coordinated public-private partnership.

\*16 Adverse environmental and social impacts associated with the implementation of eligible projects (e.g., adverse impacts on the surrounding area, such as noise and vibration associated with construction, adverse impacts on ecosystems due to land modification, changes in marine ecosystems)

\*17 Lock-in refers to carbon lock-in, a measure that avoids the continuation of systems that use large amounts of fossil fuels or delay or hinder the transition to alternative energy sources that lead to low-carbon and decarbonization; [https://www.smfg.co.jp/sustainability/materiality/environment/business/pdf/tfp\\_j.pdf](https://www.smfg.co.jp/sustainability/materiality/environment/business/pdf/tfp_j.pdf)



## <GBP eligibility assessment results (transition bonds with use of proceeds)>

DNV has identified the following based on the materials and information provided by the Issuer. GBP-1 to GBP-4 below are the findings and DNV's opinion on the four elements (including GBGLs) required to properly manage transition bonds with use of proceeds.

### GBP-1. Use of Proceeds:

The Issuer classifies the use of proceeds into eligibility criteria and defines projects that directly or indirectly contribute to the realization of the Transition Strategy and targets as eligible projects. Specifically, the eligibility criteria are categorized as shown in Table-1 and the proceeds are allocated to the support required for these economic activities as a new expenditure, such as capital investment and research and development expenditures required for the implementation of eligible projects, or refinance<sup>\*18</sup> to existing expenditure. DNV, through its assessment of the Issuer, has confirmed that eligible projects based on these eligibility criteria are consistent with the elements of CTF-1 to CTF-4. Eligible projects are assessed by the Issuer to have clear environmental benefits on the Issuer's Transition Strategy and are expected to make a direct or indirect contribution to the SDGs.

Eligible projects include green projects classified mainly under the GBP (e.g., renewable energy sector, energy conservation (energy efficiency) sector) and activities that should be undertaken at present for future carbon neutrality (e.g., initiatives for phasing out fossil fuel use, the utilization of nuclear power).

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-1 that "the issuer must use the proceeds for eligible projects that provide clear environmental benefits<sup>\*19</sup>."

\*18 Refers to the reforming or refinancing of loans. In the event of allocating to refinancing, it is recommended to indicate the period covered by the eligible project (look-back period).

\*19 Proceeds from transition bonds are also allowed to be allocated to related projects necessary to realize Just Transition and the transition strategy.

Table-1 Climate Transition Bond Eligibility criteria category

Categories (GBP classification)		Sub-categories Eligibility Criteria	
1	Energy efficiency	Promotion of thorough energy efficiency improvement	<ul style="list-style-type: none"> <li>- Houses and buildings</li> <li>- Restructuring the manufacturing industry (fuel and feedstocks transition)</li> <li>- Digital investment aimed at decarbonization</li> </ul>
		- Battery industry	
2	Renewable energy	<ul style="list-style-type: none"> <li>- Making renewable energy a major power source</li> <li>- Infrastructure</li> </ul>	
3	Low-carbon and decarbonized energy *Category set out in the Issuer's Climate Transition Bond	<ul style="list-style-type: none"> <li>- Establishing electricity and gas markets to achieve carbon neutrality</li> <li>- Utilization of nuclear power</li> </ul>	
4	Clean transportation	<ul style="list-style-type: none"> <li>- Clean transportation (GX in transport sector)</li> <li>- Resource circulation</li> <li>- Infrastructure</li> </ul>	
5	Circular economy adapted products, production technologies and processes	<ul style="list-style-type: none"> <li>- Restructuring the manufacturing sector (fuel and feedstocks transition)</li> <li>- Facilitating introduction of hydrogen and ammonia</li> <li>- Carbon Recycling and CCS</li> </ul>	
6	Environmentally sustainable management of living natural resources and land use, Circular economy	<ul style="list-style-type: none"> <li>- Food, agriculture, forestry, and fisheries</li> <li>- Resource circulation</li> </ul>	

## GBP-2. Process for Project Evaluation and Selection:

The Issuer will ensure that the project meets the GBP-1 eligibility criteria and the criteria required for eligible projects and has clear environmental benefits at present or in the timeline required by the roadmap, as well as that negative environmental and social impacts have been or will be appropriately considered (including necessary procedures in the area where the project is to be implemented).

Specifically, eligible projects to which the proceeds will be allocated will be confirmed by the "Intergovernmental Committee on the Issuance of GX Economy Transition Bonds"<sup>\*20</sup>, consisting of Director-Generals, to be consistent with the "GX Promotion Strategy" and conform to the selection criteria set out for each eligibility criterion shown in GBP-1. The eligibility of projects is assessed and selected through discussions with relevant ministries and agencies as necessary, and finally reported to the "GX Implementation Council," chaired by the Prime Minister.

Specifically, eligible projects to which the proceeds will be allocated will be confirmed by ministries in charge of the projects to be consistent with the "GX Promotion Strategy" and conform to the selection criteria set out for each eligibility criterion shown in GBP-1. Eligible projects are confirmed again through discussions with the "Intergovernmental Committee on the Issuance of GX Economy Transition Bonds," consisting of Director-Generals, and relevant ministries and agencies as necessary, and finally reported to the "GX Implementation Council," chaired by the Prime Minister.

With regard to the negative impacts of projects, DNV has confirmed that the impact on the relevant supply chain, including Just Transition, mitigation of negative impacts (e.g., actions through environmental impact assessments) and avoidance of lock-in, as shown in CTF-4, will be considered before the selection of eligible projects as well as at the implementation stage of eligible projects.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-2 that "the issuer must outline the process for determining the eligibility of the project and outline how the project considers its impact on the targets."

\*20 Members of the Intergovernmental Committee on the Issuance of GX Economy Transition Bonds: the Cabinet Secretariat, the Financial Services Agency, the Ministry of Finance, the Ministry of Economy, Trade and Industry and the Ministry of the Environment

### GBP-3. Management of Proceeds:

#### **Management of allocation of proceeds:**

The Issuer has specified the Ministry of Economy, Trade and Industry (METI) to be responsible for the allocation and management of proceeds using an internal management system. The proceeds of the Climate Transition Bond will be received in the Energy Supply and Demand Account<sup>\*21</sup> of the Special Account for Energy Measures<sup>\*22</sup> and will be managed separately from other accounts. In addition, the proceeds can be tracked and managed on an eligible project basis as “Costs of measures to promote a smooth transition to a decarbonized growth economy structure.”

#### **Management of unallocated proceeds:**

Until the proceeds are allocated to eligible projects, unallocated proceeds will be managed as cash and will not be used for other temporary investments (e.g., green investments).

The Issuer will be subject to annual inspections by the Board of Audit of Japan of its proceeds management results. During the inspections by the Board of Audit of Japan, the climate transition bond-specific management process required under GBP-3 will also be inspected.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-3 that “the issuer must track and manage the proceeds (and, where necessary, establish and manage under appropriately classified portfolio units) and disclose how unallocated proceeds are treated.”

\*21 Special account established in 2007 under the Act on Promotion of Administrative Reform for Realization of Small and Efficient Government to integrate the Special Account for Measures to Upgrade the Petroleum and Energy Supply and Demand Structure and the Special Account for Measures to Promote Power Source Development, and to clarify the accounting for energy measures;  
[https://www.mof.go.jp/policy/budget/topics/special\\_account/fy2022/2022-kakuron-6.pdf](https://www.mof.go.jp/policy/budget/topics/special_account/fy2022/2022-kakuron-6.pdf)

\*22 An account to succeed the operations that were carried out in the special account for measures to improve the oil and energy supply and demand structure.



#### GBP-4. Reporting:

##### **Allocation status reporting:**

The Issuer will report on the allocation status of proceeds on an annual basis on the Government's website, at least until the full amount of proceeds has been allocated. Allocation status reporting will be on an eligible project/eligibility criteria basis and will include the following items in consideration of confidential obligations.

- Allocated amount and unallocated balance
- Estimated amount of the proceeds allocated in the fiscal year prior to the issuance

##### **Impact reporting (environmental benefits reporting):**

The Issuer will, at least until the full amount of proceeds has been allocated, report on a project-by-project or eligibility criteria basis on key environmental benefit items (direct and expected benefits) and progress status of projects on an annual basis on the Government's website, taking into account confidential obligations and the extent practicable.

In the event of a significant change in circumstances in eligible projects (e.g., significant process changes, suspension/discontinuation, changes in specifications that have a significant impact on the environmental benefits) during the redemption period of the bond after allocations have commenced, the Issuer will disclose it in a timely manner or through reporting.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-4 that "the issuer shall, at least, report to bond investors regarding the allocation status of proceeds and quantitative or qualitative performance (environmental benefits) of eligible projects."

DNV has confirmed through an assessment based on relevant documentation and information provided by the Issuer through the Framework established by the Issuer and assessments, etc. that the Framework meets the material issues required by the relevant standards, CTFH/CTFBG and GBP/GBGLs.

## I. Introduction

### i. Challenges and initiatives against climate change in Japan

Japan, being surrounded by the sea on all sides, has geographical constraints and land-use restrictions, and has been developing and introducing various energy-saving technologies and low-carbon and decarbonized energy sources to tackle the challenges of ensuring low-cost and safe energy supply for people's lives and ensuring productivity in economic activities, as well as decarbonizing energy. The major energy infrastructures, including electricity and gas, that cover throughout Japan have achieved a highly efficient and reliable energy system.

However, Japan is also facing the emergence of energy supply risks from conventional energy systems due to various natural disasters, such as typhoons and heavy rains, which are believed to be caused by climate change, which is said to have a tendency to become more severe and frequent in recent years. There is a growing international consensus on the importance of controlling the increase in CO<sub>2</sub> and other greenhouse gases generated by the use of fossil resources and avoiding negative impacts on climate change.

The Government of Japan has been leading the international society on environmental issues such as climate change, including the adoption of the Kyoto Protocol in 1997. In FY2021, the Government made an international commitment to "achieve carbon neutrality by 2050 (reducing GHG emissions by 46% in FY2030 (compared to FY2013) and taking up the challenge of achieving a further 50% reduction as well as carbon neutrality by 2050)" as an initiative consistent with the Paris Agreement.

The Government of Japan is working to achieve decarbonization as well as industrial competitiveness and economic growth by transforming Japan's energy system (from fossil energy to clean energy) and industrial and social structures through the Green Transformation (GX) as an action against climate change by fulfilling its international commitments.

## ii. GX (Green Transformation) initiatives

In July 2022, the Government of Japan held the GX Implementation Council to discuss necessary measures to implement the transformation of the entire economic and social system, or GX (Green Transformation), by shifting the fossil fuel-oriented economy, society, and industrial structure since the Industrial Revolution to a clean energy-oriented structure. In this context, the Government plans to support investments leading to decarbonization in the power generation, industrial, transport and household sectors, and to work towards an early transition to a decarbonized society, with particular priority given to initiatives that make sectors with high GHG emissions more effective and efficient, and that contribute to strengthening industrial competitiveness and economic growth.

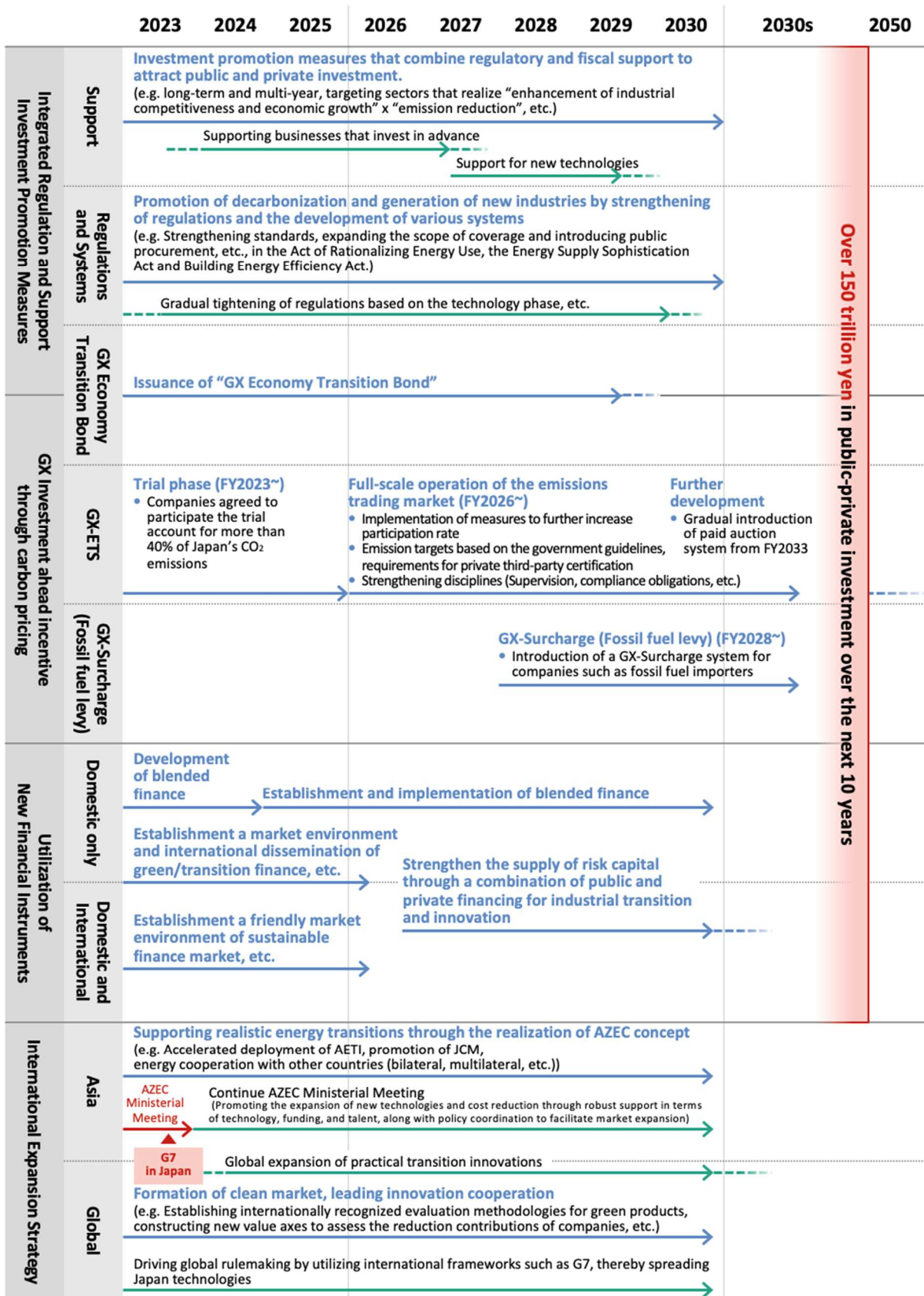
In addition, in February 2023, the Government of Japan formulated the “Basic Policy for the Realization of GX (A roadmap for the next 10 years)”<sup>\*23</sup>, Reference Figure-1 to work on the following five items.

The Basic Policy for the Realization of GX includes a comprehensive set of concepts that form the basis of the Framework in the next section.

\*23 The basic policy to simultaneously achieve decarbonization, stable energy supply and economic growth through GX, formulated through discussions at the GX Implementation Council chaired by the Prime Minister and at councils in various ministries; [https://www.meti.go.jp/english/press/2023/pdf/0210\\_003a-2.pdf](https://www.meti.go.jp/english/press/2023/pdf/0210_003a-2.pdf)

### <The Basic Policy for the Realization of GX Main items>

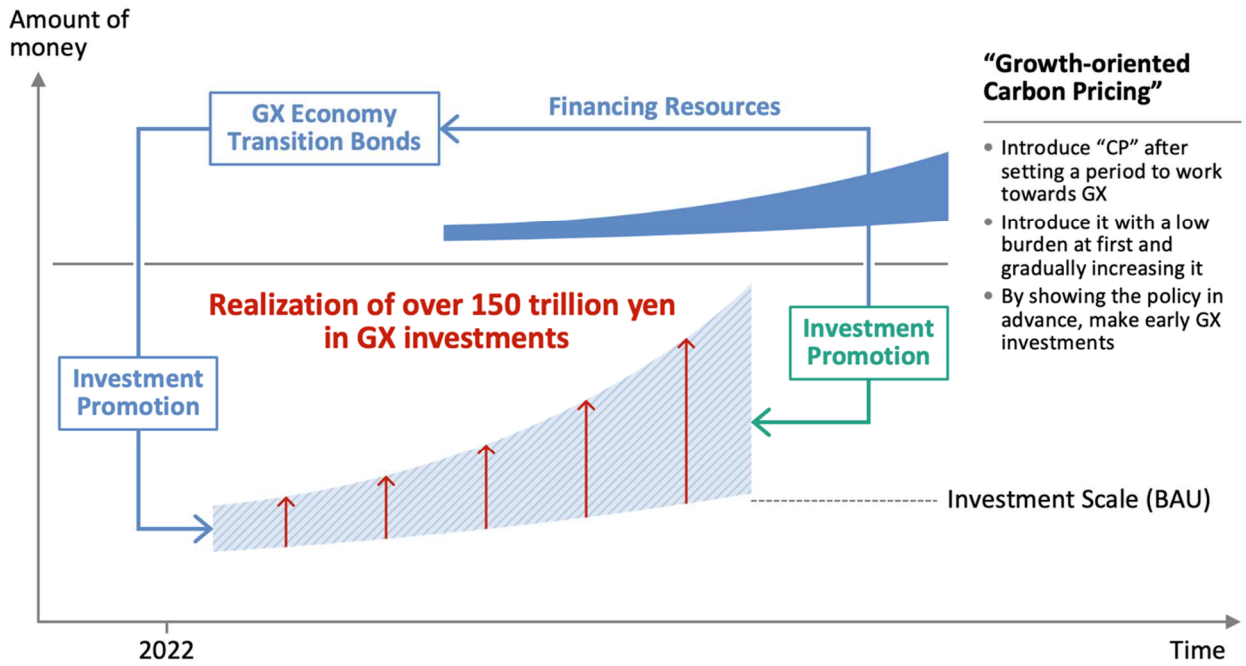
- 
1. Decarbonization initiatives towards GX based on the premise of ensuring a stable energy supply
  2. Realizing and implementing Pro-Growth Carbon Pricing Concept<sup>\*Reference Figure-2</sup>
  3. Strategy for global actions
  4. Promoting GX for entire society
  5. Evaluating and reviewing the status of progress in the implementation of new policy initiatives for realizing GX
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Reference Figure-1 “The Basic Policy for the Realization of GX (A roadmap for the next 10 years)” Extract from reference material

Reference: [https://www.meti.go.jp/press/2022/02/20230210002/20230210002\\_3.pdf](https://www.meti.go.jp/press/2022/02/20230210002/20230210002_3.pdf)





Reference Figure-2 Growth-oriented carbon pricing concept

Reference: “About growth-oriented carbon pricing”, Industrial Technology and Environment Bureau, Ministry of Economy, Trade and Industry, 14 Feb 2023

### iii. Climate Transition Bond Framework

In implementing the Climate Transition Bond, the Issuer has developed the Framework based on the three concepts and relevant national environmental plans, strategies, etc., and in a manner consistent with international/national principles, guidelines, etc.

The overview of the concept and the Framework's relationship with relevant national environmental plans, strategies, etc. are as shown below.

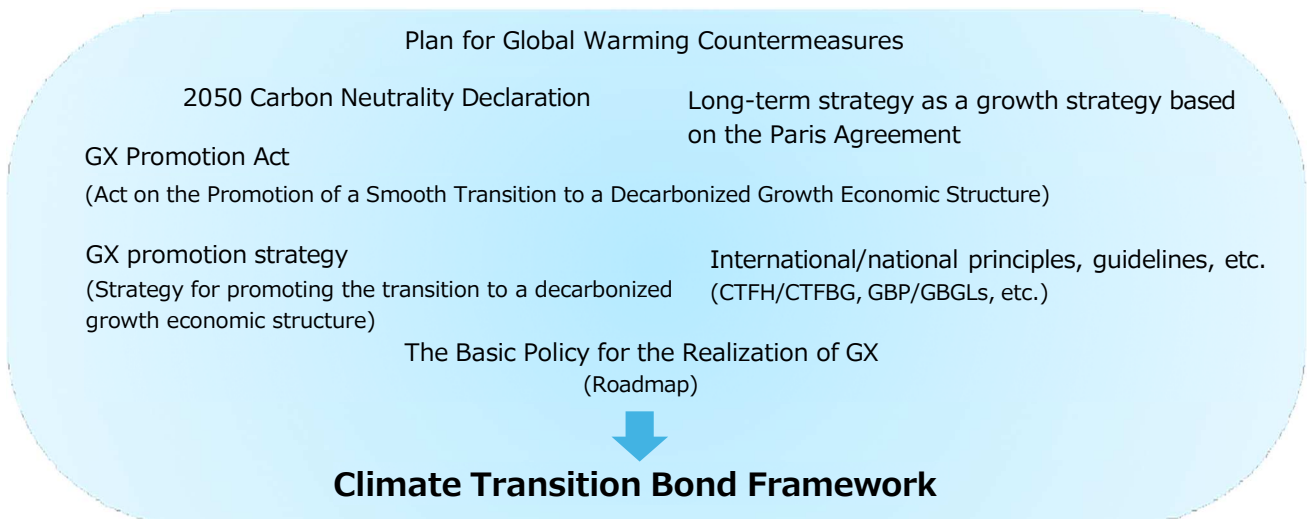
The Issuer aims to realize GX through public-private partnerships by providing approximately JPY 20 trillion in government support to the private sector over the next 10 years through the GX Economy Transition Bonds.

The principles, guidelines, etc. to which the Framework specifically refers are described in section II (3) below.

#### <GX Economy Transition Bonds Three concepts (overview)>

1. Support companies etc. tackling the challenge of decarbonization and beyond, using future carbon pricing (CP) as a reimbursement source.
2. Promote private sector's (business operators and financial institutions) transition finance, with projects that contribute to the transition towards decarbonization as the use of proceeds.
3. Establish measures and mechanisms for decarbonization by discussing with investors and the market through the GX Economy Transition Bonds.

#### <National environmental plans, strategies, etc. and the Framework>



**Issuer Name:** The Government of Japan

**Framework Name:** Climate Transition Bond Framework

**Review Provider's Name:** DNV Business Assurance Japan K.K.

**Date of Report:** 7 November 2023



## II. Scope and Objectives

The Issuer has commissioned DNV to conduct a Framework assessment on the Climate Transition Bond. The objective of the assessment of DNV is to conduct an assessment to confirm that the Issuer meets the criteria of the CTFH/CTFBG and GBP/GBGLs, which will be described later, and to provide a second party opinion on the eligibility of the Framework.

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 the Issuer.

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

### (1) Scope of review

The review assessed the following elements and confirmed their alignment with four core elements in GBP.

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds        | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting                                    |

\* The scope of review is to be applied as a part of the evaluation of the Climate Transition Bond (transition bond with specific use of proceeds).

\* The four disclosure elements of CTFH and CTFBG are included in the scope of review.

### (2) Role(s) of review provider

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Second Party Opinion  | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification                     | <input type="checkbox"/> Rating        |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |  |

### (3) Standards to be applied

No.	Standards/Guidelines <sup>*1</sup>	Scheme owner
1.	Climate Transition Finance Handbook (CTFH) <sup>*2</sup>	International Capital Market Association (ICMA), 2023
2.	Basic Guidelines on Climate Transition Finance (CTFBG) <sup>*2</sup>	Financial Services Agency, Ministry of Economy, Trade and Industry, Ministry of the Environment, 2021
3.	Green Bond Principles (GBP) <sup>*3</sup>	International Capital Market Association (ICMA), 2021
4.	Green Bond Guidelines (GBGLs) <sup>*3</sup>	Ministry of the Environment, 2022

\*1 Provide an eligibility assessment, citing relevant books recommended for reference in the principles and guidelines, etc., as appropriate.

\*2 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).

\*3 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 and edited from CTFBG).



### **III. Responsibilities of the Issuer and DNV**

The 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 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 eligible projects selected or to be selected 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 and used as a basis for this assessment were not correct or complete.



## IV. Basis of DNV's Opinion

To provide as much flexibility as possible for the Issuer, DNV has adapted our climate transition bonds assessment methodology, which incorporates the requirements of the CTFH/CTFBG and GBP/GBGLs, to create the Issuer-specific Climate Transition Bond Eligibility Assessment Protocol (hereinafter, the "Protocol"). Please refer to Schedule-2 to 5. The Protocol is applicable to climate transition bonds under the CTFH/CTFBG and GBP/GBGLs.

DNV, as an independent external reviewer, provides second party opinion according to the Protocol.

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

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

"provide an investment opportunity with transparent sustainability credentials"

As per our Protocol, the criteria against which the Climate Transition Bond has been reviewed are grouped into four common elements (disclosure elements), respectively (1) and (2) below.

### **(1) Four common elements of CTFH/CTFBG** (disclosure elements)

#### **Principle One: Issuer's Climate Transition Strategy and Governance**

The financing purpose should be shown as enabling issuer's climate change strategy.

#### **Principle Two: Business model environmental materiality**

The planned climate transition trajectory should be relevant to the environmental materiality 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.

#### **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 common elements of GBP/GBGLs** (common elements as transition bonds with use of proceeds)

#### **Principle One: Use of Proceeds**

The Use of Proceeds criteria are guided by the requirement that an issuer of a transition bond must use the proceeds 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 bond should outline the process it follows when determining eligibility of investment destinations (e.g., businesses) using transition bond 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 proceeds from a transition bond should be tracked by the issuer, that separate portfolios should be created when necessary and that a declaration of how unallocated proceeds will be handled should be made.

**Principle Four: Reporting**

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



## V. 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 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:

### i. Pre-Issuance Assessment (Climate Transition Bond Framework Assessment)

- Creation of an Issuer-specific Protocol, adapted to the purpose of the Climate Transition Bond, as described above and in Schedule-2 to 5 to this assessment;
- Assessment of documentary evidence provided by the Issuer on the Climate Transition Bond and supplemented assessment by a comprehensive desktop research. These checks refer to current assessment best practice and standards methodologies;
- Discussions with the Issuer, and review of relevant documentation;
- Documentation of findings against each element of the criteria.

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

- Interview with the management of the Issuer, and review of the relevant documentation;
- Field research and inspection (if necessary);
- Document creation of post-issuance assessment results.



## VI. Findings and DNV's Opinion

DNV's findings and opinion are as described below.

From the CTF-1 to CTF-4 in (1) below are the findings and opinions of DNV against the four common elements (disclosure elements) of CTFH and CTFBG including the Issuer's Transition Strategy. Please see Schedule-2 and 4 for details.

From the GBP-1 to GBP-4 in (2) below are the findings and opinions of DNV against the four common elements of GBP/GBGLs necessary for the Issuer to manage transition bonds. Please see Schedule-3 and 5 for details.

### (1) Findings and opinions of DNV against the four common elements (disclosure elements) of CTFH and CTFBG

#### CTF-1. Issuer's Climate Transition Strategy and Governance

##### Climate Transition Strategy:

- DNV has confirmed that the Issuer's mid-term goal quantified under the Transition Strategy, as well as the long-term goal, are consistent with the Paris Agreement and have a scientific basis.  
  
Specifically, the long-term goal is carbon neutrality in 2050 and the mid-term goal is a 46% reduction in greenhouse gases in FY2030 (compared to FY2013).
- The Issuer's Transition Strategy has specific activities to realize the Transition Strategy by the revisions etc. of the Plan for Global Warming Countermeasures, Japan's NDC (Nationally Determined Contribution), the Strategic Energy Plan and the long-term strategy as a growth strategy based on the Paris Agreement, etc. established with reference to international scenarios. As a concrete example, the Plan for Global Warming Countermeasures sets out the government's comprehensive plan to achieve the 46% reduction target for FY2030, as shown in Table-2.
- The actual GHG emissions from FY2013 to FY2021 are shown in Figure-1. Compared to the base year (FY2013): 1.408 billion t-CO<sub>2</sub>, the FY2021 figure was 1.122 billion t-CO<sub>2</sub>, with a reduction rate of 20.3%, showing a certain level of progress.  
  
The current status of these GHG emissions and absorptions and the measures to be taken are followed up every year for each sector, including energy conversion, industrial, transport and household sectors, and the plan is approved and promoted by the Global Warming Prevention Headquarters, which is attended by all ministers.
- In 2023, the Issuer formulated the "Basic Policy for the Realization of GX" as a roadmap for the next 10 years, which integrates the "GX initiatives based on the premise of ensuring a stable energy supply" and the "growth-oriented carbon pricing concept", and sets out initiatives to strengthen the industrial competitiveness and achieve economic growth in the Japanese economy.



Furthermore, the Issuer presented GX-oriented decarbonization initiatives classified into 14 categories and 22 examples of targets and strategies, GX investments, regulations and institutions and international strategies up to 2050 as “the way forward.”

- The Climate Transition Bond executed in accordance with the Issuer’s Transition Strategy contribute directly or indirectly to the SDGs and Just Transition.

In terms of direct or indirect contributions to the SDGs, the Issuer has further classified its decarbonization initiatives towards the GX, which are classified into 14 categories, into the six eligibility criteria shown in Table-3 and organized each area of contribution to the SDGs.

The “Basic Policy for the Realization of GX” also organizes Just Transition as GX promotion for the entire society, as shown in Table-4. The Article 3 of the GX Promotion Act stipulates to “promote close mutual cooperation between the State and business operators as a basic principle, while also taking into account the perspective of Just Transition.”

- The Issuer is committed to minimizing negative environmental and social impacts (negative external effects) that may arise from the implementation of the GX through its contribution to the SDGs and consideration of Just Transition.

Table-2 The Government’s comprehensive plan based on the Act on Promotion of Global Warming Countermeasures

(Base year: FY 2013 results; Progress: FY2021 results including reduction rate; Target: FY2030)

Unit: billion t-CO<sub>2</sub>

GHG emissions/absorptions (total) (Unit: billion t-CO <sub>2</sub> )		FY2013 results (Base year)	FY2021 results (Progress) Reduction rate: 20.3%	FY2030 (Target)		
				GHG emissions/absorptions	Reduction rate	
		<b>1.408</b>	<b>11.22</b>	<b>0.760</b>	<b>▲46%</b>	
GHG emissions/absorptions (breakdown)	<b>Energy-derived CO<sub>2</sub></b>	<b>1.235</b>	<b>9.88</b>	<b>0.677</b>	<b>▲45%</b>	
	Breakdown of energy-derived CO <sub>2</sub>	Industry	0.463	3.73	0.289	▲38%
		Business etc.	0.238	1.90	0.116	▲51%
		Household	0.208	1.56	0.070	▲66%
		Transportation	0.224	1.85	0.146	▲35%
		Energy conversion	0.106	0.84	0.056	▲47%
	<b>Non-energy-derived CO<sub>2</sub>, methane, N<sub>2</sub>O</b>	<b>0.134</b>	<b>1.23</b>	<b>0.115</b>	<b>▲14%</b>	
	<b>Four gases such as HFC (CFCs)</b>	<b>0.039</b>	<b>0.59</b>	<b>0.022</b>	<b>▲44%</b>	
<b>Absorption source (billion t-CO<sub>2</sub>)</b>	<b>-</b>	<b>▲0.46</b>	<b>▲0.48</b>	<b>▲0.37</b>		
	Bilateral credit system	Aim for a cumulative international emission reduction/absorption of around 0.1 billion t-CO <sub>2</sub> by FY2030 through public-private partnerships. Appropriately count the credits earned as Japan for the achievement of Japan’s NDC.				

Source: Plan for Global Warming Countermeasures, October 2021

GHG emissions and absorptions  
(converted to t-CO<sub>2</sub>, including absorptions)

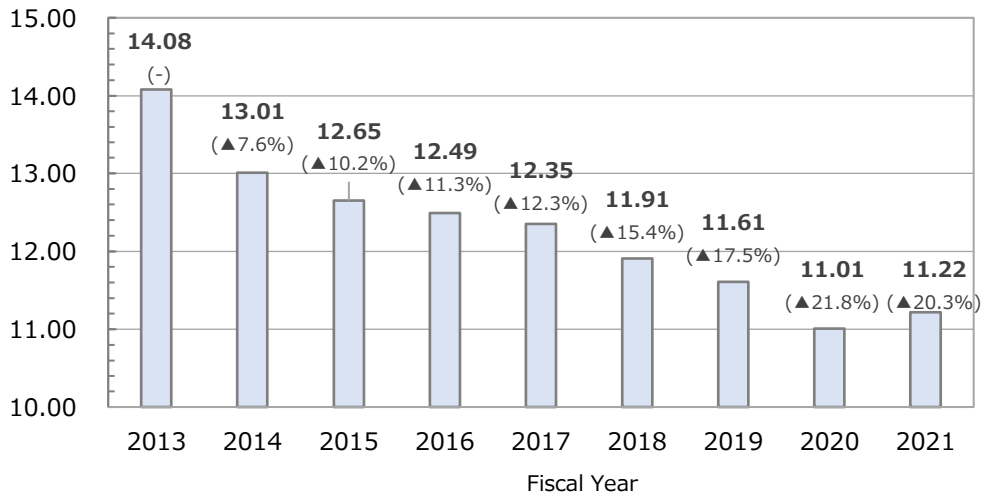










Figure-1 GHG emissions and absorptions (converted to billion t-CO<sub>2</sub>)

\*In consideration of the absorption amount

FY2013 (base year) - FY2021 (latest available definitive figures)

Source: FY2021 GHG emissions and absorptions (confirmed values), Ministry of the Environment, Office for Promotion of Transition to a Decarbonized Society, et al.

Table-3 Relationship between the eligibility criteria based on the Transition Strategy and the SDGs\*

Eligibility criteria	Energy efficiency	Renewable energy	Low and Decarbonized energy	Clean transportation	Environment ally-friendly products etc.	Biological and natural resources, circular economy, etc.
Representative SDGs goals	7, 8, 9, 11, 13	7, 8, 13	7, 8, 9, 13	7, 8, 9, 11, 13	7, 8, 9, 13	8, 9, 11, 12, 13, 14, 15
SDGs goals	 7. Affordable and clean energy  8. Decent work and economic growth  9. Industry innovation and infrastructure  11. Sustainable cities and communities				 12. Responsible consumption and production  13. Climate action  14. Life below water  15. Life on land	

\* The relationship between the eligibility criteria and the SDGs based on the Transition Strategy is complementary to the Green, Social and Sustainability Bonds: A High-Level Mapping to the Sustainable Development Goals published by ICMA, which sets out the Green Bond Principles, and is not directly linked to the financing objectives.

Table-4 Just Transition\* (GX promotion in the entire society)

1) Basic concept	<p>In promoting GX, it is important to appropriately promote labor transfer to newly created industries from the perspective of Just Transition.</p> <p>Supporting the smooth labor transfer from fossil fuel-related industries to low-carbon industries will ensure people's lives and employment and contribute to Japan's economic growth. Therefore, necessary support, including human resource development at universities etc. will be provided, while taking into account the actual conditions of each industry.</p>
2) Future actions	<p>The policy package of investment in people of JPY 400 billion over three years is significantly expanded to JPY 1 trillion over five years, taking into account the comprehensive economic measures to overcome high prices and realize economic revival approved by the Cabinet in October 2022.</p> <p>Promote Just Transition by simultaneously facilitating the acquisition of new skills and smooth labor transfer to growth sectors, including green sectors, through support for the facilitation of labor transfer to growth sectors etc. and support for job transfers for career advancement of incumbent workers.</p>

\* "Just Transition" is a concept put forward by the International Trade Union Confederation (ITUC) at COP15 in 2009.

#### Governance:

- The Issuer has established structures and mechanisms to promote the Transition Strategy as a country. The above plans and strategies, which form the basis for the implementation of the Transition Strategy, will be updated as necessary through annual or periodic follow-up and revision.
- The Issuer plans to review the Transition Strategy and the initiatives for its realization and to promote the strategy in the event of major changes to the Plan for Global Warming Countermeasures, which is part of the basis for the strategy implementation, and the Strategic Energy Plan.
- For GX implementation, the GX Implementation Council, chaired by the Prime Minister, has been held since July 2022 to have discussions with relevant ministers and experts to determine the policy direction.

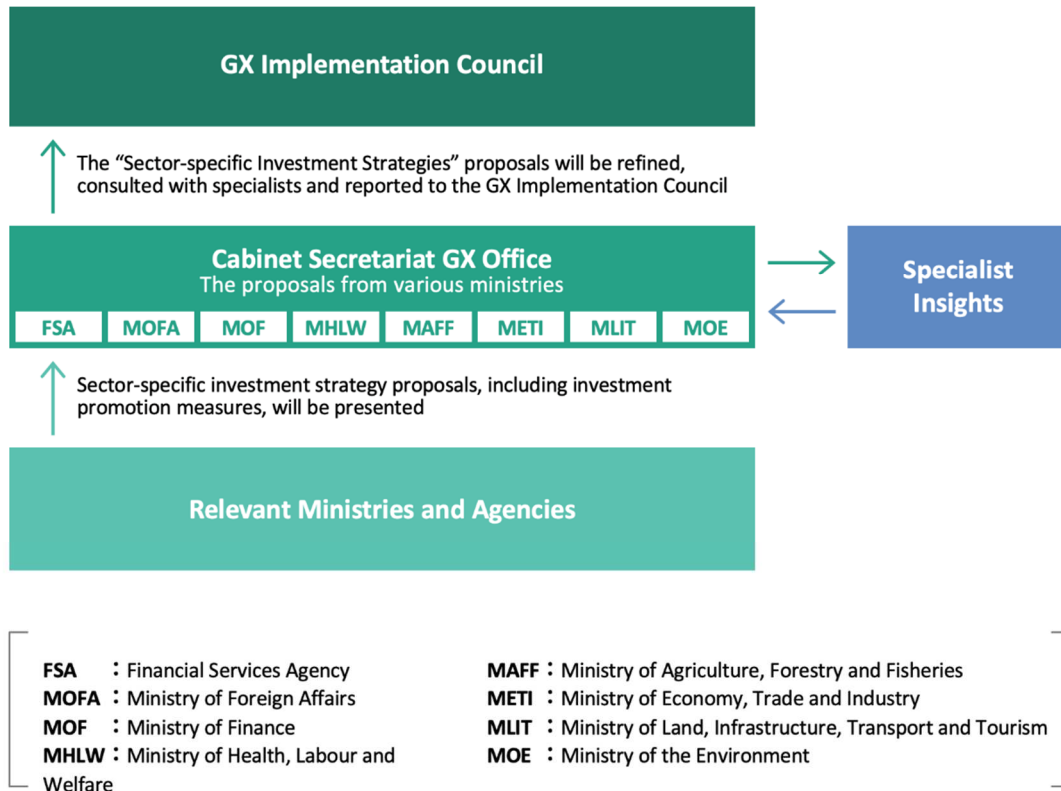


Figure-2 GX Implementation Council

- Based on the assessment of the Transition Strategy based on the Framework and the “Basic Policy for the Realization of GX” developed by the national plans etc., DNV has confirmed that the implementation plan is credible, ambitious and achievable.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-1 that it “should be directed towards achieving a GHG reduction strategy in line with the goals of the Paris Agreement.”

## **CTF-2. Business model environmental materiality**

### **Environmental materiality:**

- The Issuer recognizes that the manufacturing sector accounts for approximately 20% of Japan's GDP and is a key sector of the economy, that Japan's energy self-sufficiency rate is 13.3% (FY2021) and the country is dependent on energy resources from overseas, and that changes in the international energy situation since 2022 is making energy security challenges in business activities and people's lives more apparent.
- In this context, DNV believes that the GX can be positioned as an important industrial and energy policy to shift the industrial and social structure to focus on clean energy, making maximum use of decarbonization-related technologies owned by Japanese companies, in order to achieve a stable energy supply, promote decarbonization and economic growth.

### **Scenario considerations:**

- In advancing the GX, the Issuer classifies the sectors mainly related to GHG emissions into "energy supply side (energy conversion sectors such as power generation)" and "energy demand side (household and industrial sectors)." The Issuer has further developed GHG (CO<sub>2</sub>) emission reduction image etc. for major emission sectors (11 sectors in total, including power generation, industrial and transport sectors) by making the roadmap for the promotion of transition finance consistent with various governmental measures and scenarios (e.g., IEA, IPCC, SBTi).

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-2 that "the transition strategy should relate to the environmentally material aspects of the issuer's business model and take into account several future scenarios that could influence the decision on current materiality."

Table-5 Main categories/types of sectors (eligibility criteria) mainly related to GHG emissions

\*Eligibility criteria relevant to several sectors

Category of energy supply and demand	Sector types (GX category)	Eligibility criteria
Energy supply side	Energy conversion sector	<ul style="list-style-type: none"> <li>- Making renewable energy a major power source</li> <li>- Utilization of nuclear power</li> <li>- Facilitating the introduction of hydrogen and ammonia *</li> <li>- Establishing electricity and gas markets to achieve carbon neutrality</li> <li>- Battery industry *</li> </ul>
Energy demand side	Household sector	<ul style="list-style-type: none"> <li>- Restructuring the manufacturing industry (fuel and feedstocks transition) *</li> <li>- Battery industry *</li> <li>- GX in transport sector *</li> <li>- Digital investment aimed at decarbonization *</li> <li>- Houses and buildings *</li> <li>- Infrastructure</li> </ul>
	Industrial sector	<ul style="list-style-type: none"> <li>- Facilitating the introduction of hydrogen and ammonia *</li> <li>- Restructuring the manufacturing industry (fuel and feedstocks transition) *</li> <li>- Battery industry *</li> <li>- Resource circulation</li> <li>- GX in transport sector *</li> <li>- Digital investment aimed at decarbonization *</li> <li>- Houses and buildings *</li> <li>- Infrastructure</li> <li>- Carbon Recycling and CCS</li> <li>- Food, agriculture, forestry, and fisheries</li> </ul>

Table-6 Roadmap for promoting transition finance

(1) METI	(2) Other sectors
Steel sector	International shipping sector (MLIT)
Chemical sector	Inland shipping sector (MLIT)
Power sector	Aviation sector (MLIT)
Gas sector	
Oil sector	
Pulp and paper sector	
Cement sector	
Automotive sector	

METI: Ministry of Economy, Trade and Industry sector

MLIT: Ministry of Land, Infrastructure, Transport and Tourism

Source: [https://www.meti.go.jp/policy/energy\\_environment/global\\_warming/transition\\_finance.html](https://www.meti.go.jp/policy/energy_environment/global_warming/transition_finance.html)

**CTF-3. Climate transition strategy to be ‘science-based’ (including targets and pathways)**

**Science-based strategies, targets and pathways:**

- The Issuer's Transition Strategy is defined by scientifically-based CO<sub>2</sub> reduction targets and pathways consistent with the Paris Agreement.
- Specifically, the Issuer has set targets and pathways based on the strategies and plans described in CTF-1, and index and quantify mid-term (FY2030) and long-term (FY2050) goals for (total) GHG emission reduction in Japan, together with the base year (FY2013). In particular, the means to achieve the mid-term (FY2030) goal are published for each industrial sector. These targets, pathways and means of achieving the targets have been discussed through a number of meetings consisting of experts and academics, and the results have been disclosed in detail in official documentation and information.
- In the latest year FY2021, CO<sub>2</sub> emissions (GHG emissions) was 1.122 billion t-CO<sub>2</sub> (reduction rate: 20.3%), showing a certain level of progress (see Table-7).

Table-7 Long-term and mid-term CO<sub>2</sub> reduction targets

Fiscal year	Targets	CO <sub>2</sub> emissions*
2013	Base year	1.408 billion t-CO <sub>2</sub>
(2021)	(Latest confirmed value: 20.3% reduction)	(1.122 billion t-CO <sub>2</sub> )
2030	CO <sub>2</sub> emissions: 46% reduction (Challenging the 50% reduction)	0.76 billion t-CO <sub>2</sub>
2050	Carbon neutrality	0 billion t-CO <sub>2</sub>

\* CO<sub>2</sub> emissions (GHG emissions): Calculated in accordance with IPCC guidelines and includes all coverage areas and gases with the coverage ratio of 100%; CO<sub>2</sub> emissions and absorptions are combined (carbon neutrality refers to zero CO<sub>2</sub> emissions and absorptions combined).

- In addition, the Government is also working on a strategy to invest more than JPY 150 trillion to achieve the GX targets by incentivizing GX promotion through the future introduction of carbon pricing and through blended finance that combines public and private investments, including the GX Economy Transition Bonds.
- DNV recommends that the Issuer also proactively considers and discloses where possible in the future the progress to achieve the 2030 and 2050 targets (e.g., short-term targets up to 2030 and how they will be reduced between 2030 and 2050), which have a scientific basis as shown in Table -7.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-3 that “the issuer’s transition strategy should be based on science-based targets and pathways towards transition.”

## CTF-4. Implementation transparency

### Investment plan:

- The Issuer discloses the basic investment program for the implementation of the Transition Strategy.
- Specifically, the investment plan is to provide upfront investment support (GX Economy Transition Bonds) in the amount of approximately JPY 20 trillion as government support over the next 10 years in order to lead to an overall public-private investment of over JPY 150 trillion over the same period starting in 2023.
- The main investment destinations of the Climate Transition Bond are the “promotion of non-fossil energy (JPY 6-8 trillion),” “industrial restructuring and radical energy conservation in a combination of supply and demand (approximately JPY 9-12 trillion),” and “resource recycling and carbon fixation technologies (approximately JPY 2-4 trillion).” These investment programs are disclosed in the Framework, the “Basic Policy for the Realization of GX”, etc. as necessary information for dialogue with the market.
- The investment program (investment amount and investment destinations) after the above (from 2033 onwards) until 2050 will be considered in the course of future GX initiatives.
- The investment destinations of the GX Economy Transition Bonds (approximately JPY 20 trillion) include mainly green projects classified mainly under the GBP (e.g., renewable energy sector, energy conservation (energy efficiency) sector) and activities that should be undertaken at present for future carbon neutrality (e.g., initiatives for phasing out fossil fuel use, the utilization of nuclear power).

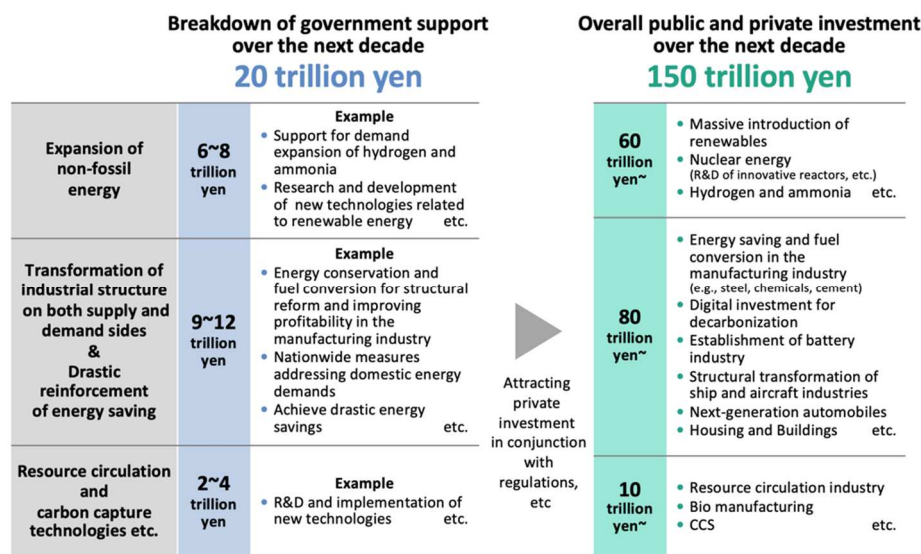


Figure-3 Image of governmental support and overall public-private investments for the 10 years since 2023

Source: Intergovernmental Committee on the Issuance of GX Economy Transition Bonds (1st meeting), June 2023



**Just Transition, mitigation of negative impact, avoidance of lock-in:**

- The Issuer plans to ensure that Just Transition, mitigation of negative impacts and avoidance of lock-in are in place in the “Basic Policy for the Realization of GX” and the selection process of investment destinations (eligible projects). Specifically, the policy for Just Transition is set out in the “Basic Policy for the Realization of GX” as “promotion of GX for the entire society (section 5).” In addition, with regard to mitigation of negative impacts and avoidance of lock-in, it is to be confirmed in the selection process of investment destinations (eligible projects) that they do not fall under the pre-defined exclusion criteria and that they are consistent with the GHG reduction roadmap.

DNV has confirmed through reviews of the Framework and the roadmap that the implementation is transparent and that the adequacy of the implementation has been explained and agreed by the Issuer.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by CTF-4 that “the dialogue with the market on the provision of green, sustainability and sustainability-linked finance intended to finance the issuer's transition strategy should, as far as possible, also have transparency with regard to the investment program including capital and operating costs.”

## Findings and opinions of DNV against the four common elements\* of GBP and GBGLs

\* The four elements are applied as criteria for transition bonds that specify the use of proceeds. References to “green” in the description citing GBP should be read as “transition” where appropriate.

### GBP-1. Use of Proceeds

- With regard to the eligibility criteria for the use of proceeds, the Issuer defines projects that meet the elements of the Transition Strategy and the roadmap and related principles, guidelines, etc. as eligible businesses (eligible projects).
- Specifically, the proceeds will be allocated to projects to achieve carbon neutrality in 2050 and a 46% reduction in FY2030 (compared to FY2013), based on the “GX Promotion Strategy.” The proceeds are to be invested in projects that are truly difficult for the private sector alone to make investment decisions and that contribute to emission reductions and the realization of industrial competitiveness and economic growth, and will be prioritized based on the basic approach as shown in Reference Table-1.
- The “basic conditions” (overview) in the selection of the use of proceeds of the GX Economy Transition Bonds are shown in Table-8 and the Green/Transition Finance Eligibility Criteria are shown in Table-5 (reposted).
- In addition, the Issuer plans to prioritize projects of 1) strengthening industrial competitiveness and economic growth and 2) emission reductions out of the above basic conditions that meet one of each of the categories A to C and ① to ③ listed below as candidates for support (Reference Table-1).

Table-8 The GX Economy Transition Bonds “Basic conditions” in the selection of the use of proceeds (overview)

Basic conditions (overview)	
I.	Those being truly difficult for the private sector alone to make investment decisions
II.	Those contributing to 1) strengthening industrial competitiveness and economic growth, which are essential for achieving GX, and 2) emission reductions*
III.	Integrity with regulatory and institutional aspects that change companies’ investments and the behavior of the demand side
IV.	Those leading to increased human and physical investments in the country

Reference Table-1 Priority assessment based on the types in the basic conditions section II

1) Strengthening industrial competitiveness and economic growth	2) Emission reductions
<p>A. Growth investments with a view to acquiring foreign demand or increasing domestic demand, with technological or business innovation potential or</p> <p>B. Growth investments that contribute to both reducing fossil raw materials and energy and improving agglomeration (e.g., integration, restructuring and mark-ups) utilizing advanced technologies or</p> <p>C. Measures to address domestic demand in the early period of the introduction of key commodities for which a nation-wide market is expected (also involving supply-side investments)</p>	<p>① R&amp;D investments that contribute to future national reductions through technological innovation or</p> <p>② Capital investments etc. that are technically effective in reducing emissions and contribute directly to domestic emission reductions or</p> <p>③ Measures to address domestic demand in the early period of introduction of key commodities with a nation-wide demand and high long-term reduction effects</p>

- Based on the roadmap, the Issuer has defined 14 categories of the eligibility criteria based on the GX type. The eligibility criteria have a set of eligible business assessment criteria (internal criteria) in place that are aligned with the GBP classification and the way forward as set out in the roadmap.
- Eligible projects that are candidates for the use of proceeds are selected based on the eligible business assessment criteria (internal criteria) set out for each eligibility criterion, as well as the basic conditions and priority assessment described above. In each issue of the bond, the Issuer establishes a protocol whereby eligible projects with appropriate allocation needs are selected out of the candidate projects for actual use of the proceeds.
- The GBP classification of the eligible criteria, representative candidate projects and an overview of DNV's opinion (including the Issuer's specific measures and key assessment criteria) are shown in Table-9. DNV has confirmed through its assessment of the Issuer that the representative projects evaluated as candidate uses of proceeds meet the eligibility criteria (assessment criteria for eligible projects) and are eligible as uses of proceeds of the Climate Transition Bond and that the above protocol established by the Issuer is properly implemented.
- The Issuer has also organized in relation to the policy roadmap to be organized in the reference material of the "Basic Policy for the Realization of GX" for each of the sub-categories of the eligibility criteria, and the roadmap for promoting

transition finance shown in Table-6, where the eligibility criteria and use of proceeds are explained as being closely related to the various initiatives.

- In addition to the eligible candidate uses of proceeds (eligible projects) shown in Table-9, the Issuer may have additional projects that have been identified as eligible under the protocol.
- DNV recommends the Issuer to establish in the future and disclose, where necessary, specific measures and how compliance with the assessment criteria has a scientific basis in order to clarify that the candidate uses of proceeds comply with the GBP classification.

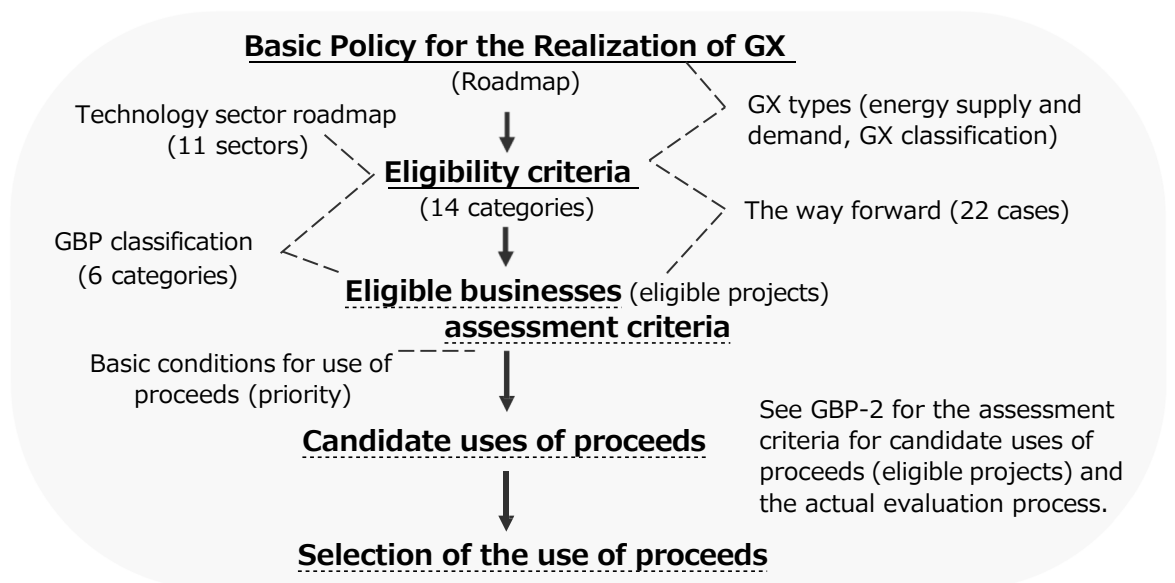



Figure-4 Relationship between the Basic Policy for the Realization of GX (roadmap) and the use of proceeds

Table-5 (reposted) Main categories/types of sectors (eligibility criteria) mainly related to GHG emissions

\*Eligibility criteria relevant to several sectors

Classification of energy supply and demand	Sector types (GX classification)	Eligibility criteria
Energy supply side	Energy conversion sector	<ul style="list-style-type: none"> <li>- Making renewable energy a major power source</li> <li>- Utilization of nuclear power</li> <li>- Facilitating the introduction of hydrogen and ammonia*</li> <li>- Establishing electricity and gas markets to achieve carbon neutrality</li> <li>- Battery industry*</li> </ul>
Energy demand side	Household sector	<ul style="list-style-type: none"> <li>- Restructuring the manufacturing industry (fuel and feedstocks transition)*</li> <li>- Battery industry*</li> <li>- GX in transport sector*</li> <li>- Digital investment aimed at decarbonization*</li> <li>- Houses and buildings*</li> <li>- Infrastructure</li> </ul>
	Industrial sector	<ul style="list-style-type: none"> <li>- Facilitating the introduction of hydrogen and ammonia*</li> <li>- Restructuring the manufacturing industry (fuel and feedstocks transition)*</li> <li>- Battery industry*</li> <li>- Resource circulation</li> <li>- GX in transport sector*</li> <li>- Digital investment aimed at decarbonization*</li> <li>- Houses and buildings*</li> <li>- Infrastructure</li> <li>- Carbon Recycling and CCS</li> <li>- Food, agriculture, forestry, and fisheries</li> </ul>


Table-9 The GBP classifications of the eligibility criteria and representative nominated use of proceeds (eligible projects) and an overview of DNV’s opinion

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV’s Opinion (including the Issuer’s specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
<b>1</b> <b>Energy efficiency</b> 	1.1: Promotion of thorough energy efficiency improvement	<ul style="list-style-type: none"> <li>- Promote the spread of energy-efficient appliances</li> </ul>	<ul style="list-style-type: none"> <li>- Energy-saving is an initiative to reduce the amount of energy equivalent to 62 million kiloliters of crude oil (CO<sub>2</sub> reduction: equivalent to 0.16 billion tonnes) in the period FY2013-2030, and is considered to be an important contribution to the reduction of CO<sub>2</sub> emissions for the country as a whole (1.408 billion tonnes in 2013).</li> <li>- The major assessment criteria include heat pump water heaters (e.g., energy efficiency of 3.5 or more* The FY2025 target standard in the energy-saving top runner scheme), any of the following: non-fossil use ratio (increase of 30% or more) or quantity (1,000 kiloliter or more) combined with energy saving, energy consumption intensity improvement ratio (e.g., 15% or more), etc. In the case of tailor-made projects*, the project is eligible if it meets one of the following criteria for the entire factory/workplace: energy-saving ratio + non-fossil use ratio increase: 10% or more, energy-saving amount + non-fossil use amount: 700 kiloliter or more, or energy consumption intensity improvement ratio: 7% or more, etc.</li> </ul> <p>* Projects that upgrade to equipment that involves mechanical design or that is designed and manufactured to suit the purpose and use of the business operator (tailor-made equipment)</p> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Current situation and challenges for the manufacturing industry - Future policy directions <a href="https://www.meti.go.jp/shingikai/sankoshin/seizo_sangyo/pdf/014_04_00.pdf">https://www.meti.go.jp/shingikai/sankoshin/seizo_sangyo/pdf/014_04_00.pdf</a></li> <li>- Energy saving legislation for manufacturers of energy-consuming equipment - Top Runner Scheme <a href="https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/equipment/">https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/equipment/</a></li> <li>- Act on Rationalizing Energy Use and Conversion to Non-fossil Energy (Energy</li> </ul>


Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<p>saving Act)</p> <p><a href="https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/overview/">https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/overview/</a></p>
	1.2: Houses and buildings	<ul style="list-style-type: none"> <li>- Support for building new houses and buildings with high energy efficiency and retrofitting to improve energy efficiency</li> <li>- Replacing windows with thermal insulated models with higher energy efficiency</li> </ul>	<ul style="list-style-type: none"> <li>- ZEH (Net Zero Energy House) and ZEB (Net Zero Energy Building), which virtually reduce CO<sub>2</sub> emissions from buildings to zero, are expected to promote the introduction of renewable energy sources such as solar power generation installed on roofs, in premises, etc. as well as to save energy in buildings. In addition, activities to reduce energy use in existing buildings, such as refurbishment with insulated windows, are expected to reduce CO<sub>2</sub> emissions associated with energy use in houses and buildings.</li> <li>- The Government has established the Top Runner Scheme for building materials and is working towards 2050 by setting technical requirements for products, components and equipment to be covered.</li> <li>- The major assessment criteria are that the building is ZEH or ZEB and that the thermal transmittance coefficient (Uw value) of insulated windows is 1.9 or lower, etc. The target projects are the introduction of products that exceed the 2030 target level in the Top Runner Scheme for building materials etc.</li> </ul> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Energy saving legislation for manufacturers of energy-consuming equipment - Top Runner Scheme <a href="https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/equipment/">https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/equipment/</a></li> <li>- Act on the Improvement of Energy Consumption Performance of Buildings (Building Energy Saving Act) <a href="https://www.mlit.go.jp/jutakukentiku/house/08.html">https://www.mlit.go.jp/jutakukentiku/house/08.html</a></li> </ul>
	1.3: Digital investment aimed at decarbonization	<ul style="list-style-type: none"> <li>- Facilitating the development of and investment in energy efficient semiconductors, photonics electronics convergence technologies, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Initiatives to reduce the use of electricity by semiconductors used in all industries to between one-fifth and one-tenth of the current level and investments in the development of photonics-electronics convergence technology to realize energy savings in data centers, which are expected</li> </ul>


Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<p>to expand in the future, are expected to lead to reduced electricity use in the future.</p> <ul style="list-style-type: none"> <li>- The major assessment criteria are that the project scale is at least JPY 200 billion, that the project has state-of-the-art facilities and equipment performance and that the semiconductor device performance index (bandwidth density/power, (Gbps/mm)/(pJ/bit)) is at least 800 times higher than that of popular products at the time of research and development.</li> </ul> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Building the Next Generation Digital Infrastructure" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_15_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_15_randd.pdf</a></li> </ul>
	1.4 Battery industry	<ul style="list-style-type: none"> <li>- Investments in plants manufacturing batteries together with their material and components</li> </ul>	<ul style="list-style-type: none"> <li>- The battery industry is considered to be an important industry from the perspective of promoting the effective use of renewable energy sources with fluctuating power generation and the electrification of various industrial and household sectors from the use of fossil fuels (heat, electricity and power).</li> <li>- Initiatives to establish supply chains, including the recycling of storage batteries (e.g., research and development of next-generation storage batteries, manufacturing including materials, recycling technologies) are considered to be important from the perspective of promoting the electrification of the entire society and the sustainable use of storage batteries.</li> <li>- The Government is working towards the goal of establishing a domestic manufacturing infrastructure that will enable a storage battery capacity of 150 GWh/year by 2030, as part of the Battery Industry Strategy in 2022.</li> <li>- The major assessment criteria are that the project has an expansion of production capacity for in-vehicle storage batteries (3,000 MWh/year or</li> </ul>







Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<p>more) and stationary storage batteries (300 MWh/year or more).</p> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- About mission-oriented automobile policy <a href="https://www.meti.go.jp/shingikai/mono_info_service/mobility_kozo_henka/pdf/004_02_00.pdf">https://www.meti.go.jp/shingikai/mono_info_service/mobility_kozo_henka/pdf/004_02_00.pdf</a></li> <li>- Research, development and social implementation plan related to the GI Fund project "Development of next-generation storage batteries and motors" <a href="https://www.meti.go.jp/press/2021/11/20211111004/2021111004-2.pdf">https://www.meti.go.jp/press/2021/11/20211111004/2021111004-2.pdf</a></li> </ul>
2	<p><b>Renewable energy</b></p> 	<p>2.1: Making renewable energy a major power source</p> <ul style="list-style-type: none"> <li>- Next-generation solar cells (perovskite)</li> <li>- Floating offshore wind</li> <li>- Development of submarine DC power transmission etc.</li> </ul>	<ul style="list-style-type: none"> <li>- With the aim of making renewable energy a major power source, the development and demonstration of technologies that enable power generation using renewable energy sources in limited land and sea areas in Japan with geographical constraints is considered to be an important initiative, together with the expansion and application of existing renewable energy sources.</li> <li>- Specifically, next-generation solar batteries (perovskite), as shown in the typical use of proceeds (eligible projects), are expected to be installed on walls and curved surfaces, taking advantage of their lightness and flexibility. Floating offshore wind turbines are also expected to be installed in sea areas where it is difficult to use a landing type. Both are considered to be important initiatives for the expansion of renewable energy in Japan with geographical constraints.</li> <li>- In addition to the typical use of proceeds, nation-wide initiatives to make renewable energy a major power source, including further expansion and application of existing technologies, lower costs and various schemes, are considered to be important initiatives for the realization of GX, including raising the renewable energy source ratio to 36-38% or higher by 2030.</li> <li>- In addition, further introduction of renewable energy requires to strengthen interconnection lines (transmission facilities) connecting the various regions of Japan. The Government plans to develop transmission facilities, including submarine DC transmission from Hokkaido to Honshu,</li> </ul>

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<p>on a scale of more than 10 million kW over a period of about 10 years starting in FY2023.</p> <ul style="list-style-type: none"> <li>- The major assessment criterion is that the project is capable of achieving low generation costs (e.g., wind: JPY 8-9/kWh; solar: JPY 14/kWh).</li> </ul> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Low-cost offshore wind power" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_01_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_01_randd.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Development of next-generation solar batteries" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_02_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_02_randd.pdf</a></li> </ul>
	2.2: Infrastructure	<ul style="list-style-type: none"> <li>- Development of cities and communities contributing to decarbonization</li> </ul>	<ul style="list-style-type: none"> <li>- Initiatives to optimize (minimize) energy use through the introduction of decarbonized products, technologies and local energy networks in cities and regions and the effective use of renewable energy and stored energy are considered to be important for decarbonizing the industrial sector.</li> <li>- The major assessment criteria are that the project has a plan with the total electricity demand in the city or region concerned is equal to the total electricity supply from renewable energy and other sources, and that the project includes initiatives that are consistent with the Global Warming</li> </ul>

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
3	<b>Low-carbon and decarbonized energy</b>  *Classification set out in the Issuer's Climate Transition Bond  	3.1: Establishing electricity and gas markets to achieve carbon neutrality	<ul style="list-style-type: none"> <li>- Promoting zero-emission thermal power</li> <li>- The technology development to expand the introduction of low-carbon and decarbonized energy (zero-emission thermal power etc.) using gases such as hydrogen (including hydrogen carriers such as MCH) and ammonia, and the development of various environments for research and development and implementation related to supply chain establishment is considered to be an important initiative for achieving a stable energy supply and decarbonization in the future.</li> <li>- The major criterion is that the project is capable of realizing supply costs in 2030 and 2050 equivalent to those of fossil fuels (e.g., below JPY 30/Nm<sup>3</sup> in 2030 and below JPY 20/Nm<sup>3</sup> in 2050).</li> </ul> Reference links: <ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Establishment of a large-scale hydrogen supply chain" <a href="https://www.meti.go.jp/press/2021/05/20210518005/20210518005-2.pdf">https://www.meti.go.jp/press/2021/05/20210518005/20210518005-2.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Establishment of a fuel ammonia supply chain" <a href="https://www.meti.go.jp/press/2021/09/20210914003/20210914003-b.pdf">https://www.meti.go.jp/press/2021/09/20210914003/20210914003-b.pdf</a></li> </ul>
		3.2: Utilization of nuclear power	<ul style="list-style-type: none"> <li>- Next-generation advanced reactors with built-in new safety mechanisms</li> <li>- Initiatives to improve the business environment, research and development and demonstration of innovative light water reactors, high temperature gas reactors, fast reactors, etc. incorporating new safety mechanisms are considered to be an important initiative for the restart of existing nuclear power plants (expecting 20-22% of power generation as of 2030) in order to achieve carbon neutrality and stable energy supply from 2030 onwards.</li> <li>- Low-cost, stable and large-volume hydrogen production and supply using high-temperature gas reactors is expected to lead to increased use in various industrial sectors, including the steel and chemical industries, and</li> </ul>

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<p>contribute to the decarbonization of the entire industry.</p> <ul style="list-style-type: none"> <li>- The major assessment criteria are that the project is based on the strategic roadmap for the development of fast reactors and that the project has high-temperature gas reactors that enable hydrogen production (e.g., expecting to supply hydrogen at a rate of approximately JPY 12/Nm<sup>3</sup> in 2050).</li> </ul>
<p><b>4</b></p> <p><b>Clean transportation</b></p> 	<p>4.1 Clean transportation (GX in transport sector)</p>	<ul style="list-style-type: none"> <li>- Support for the introduction of next-generation vehicles</li> <li>- Developing demonstration aircraft by 2030s and spreading the use of zero-emissions ships, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- The transport sector accounts for approximately 20% of the country's total GHG emissions and is the second largest emitting sector after the industrial sector (FY2019 results: 0.206 billion t-CO<sub>2</sub>). In order to decarbonize the transport sector, the de-fossilization (decarbonization) of fuels used in the automotive, aviation and shipping industries, as well as electrification and energy-saving (improvement in transport modes such as logistics) are considered to be important and it needs to be promoted in both the industrial and household sectors.</li> <li>- The major assessment criteria include the introduction of zero-emission and low-carbon vehicles such as EVs as clean energy vehicles, FCVs (passenger cars and commercial) and PHEVs*; hydrogen aircraft as next-generation aircraft (engine performance, hydrogen tank weight, energy-saving airframe design (cruising performance), etc.).</li> </ul> <p>* DNV has confirmed that the target PHEVs have been estimated and confirmed by the Issuer to meet internationally-known standards (&lt;50g-CO<sub>2</sub>/passenger-km*) at the time of the Framework assessment. Note that the standard may become stricter in the future (e.g., only vehicles with zero direct emissions, such as EVs and FCVs with 0g-CO<sub>2</sub>/passenger-km, will be eligible), so if the Issuer includes PHEVs as a use of Transition Bond proceeds, it is expected to reassess at the time of the Transition Bond issuance.</p> <p>*Climate Bonds Standard v4.0 Land Transport Standard, April 2023</p>


Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<p>Reference links:</p> <ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Building a smart mobility society" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_14_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_14_randd.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Development of next generation aircraft" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_16_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_16_randd.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Development of next generation ships" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_17_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_17_randd.pdf</a></li> </ul>
	4.2 Infrastructure	- Development of cities and communities contributing to decarbonization	<ul style="list-style-type: none"> <li>- The energy used in each urban and regional (industrial zones etc.) infrastructure (ports, roads, (hybrid) dams, sewers, etc.) is to be decarbonized across the entire area.</li> <li>- The major assessment criteria are that the project has a plan with the total electricity demand in the city or region concerned is equal to the total electricity supply from renewable energy and other sources, and that the project includes initiatives that are consistent with the Plan for Global Warming Countermeasures.</li> </ul> <p>Reference links: *Carbon neutral ports as a typical example</p> <ul style="list-style-type: none"> <li>- About carbon neutral ports (CNPs) <a href="https://www.mlit.go.jp/kowan/kowan_tk4_000054.html">https://www.mlit.go.jp/kowan/kowan_tk4_000054.html</a></li> <li>- Manual for the preparation of the "Port Decarbonization Promotion Plan" <a href="https://www1.mlit.go.jp/kowan/content/001597599.pdf">https://www1.mlit.go.jp/kowan/content/001597599.pdf</a></li> <li>- Outline of the certification system for decarbonization of port terminals (CNP certification (container terminals)) (Draft) [Trial version] <a href="https://www1.mlit.go.jp/kowan/content/001598435.pdf">https://www1.mlit.go.jp/kowan/content/001598435.pdf</a></li> </ul>
5	<b>Circular economy adapted products, production technologies and processes</b>	5.1: Restructuring the manufacturing industry	<ul style="list-style-type: none"> <li>- Development and introduction of innovative technologies such as hydrogen reduction steelmaking</li> <li>- GHG emissions in the industrial sector are mainly associated with the use of electricity and heat. The industrial sector is the largest sector, accounting for approximately 30% of Japan's GHG emissions (FY2019)</li> </ul>

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
   	(fuel and feedstocks transition)	<ul style="list-style-type: none"> <li>- Conversion to Carbon-Recycling</li> </ul>	<p>result: 0.384 billion t-CO<sub>2</sub>). In particular, in the steel, chemical, cement, pulp and paper and biomanufacturing industries, which are so-called GHG-intensive industries due to their high consumption of electricity and heat in the product manufacturing process, various energy-saving measures as well as fuel and feedstocks transition (from coal and heavy oil to gas, decarbonized energy or feedstocks that do not rely on fossil resources), etc. are considered to be important initiatives.</p> <ul style="list-style-type: none"> <li>- The above-mentioned GHG-intensive industries are required to be addressed with reference to the technology roadmap prepared by the Ministry of Economy, Trade and Industry (METI) as a specific direction for the transition towards achieving carbon neutrality in 2050.</li> <li>- The major assessment criteria are that the project can establish ironmaking process (blast furnace hydrogen reduction technology and direct hydrogen reduction technology) that reduces CO<sub>2</sub> emissions by 50% or more in the steel sector, or industrial furnaces with 50% hydrogen mixing by FY2031 to decarbonize the heat used or technology to reduce peak electricity consumption and electricity receiving capacity by 30% or more in the manufacturing sector.</li> </ul> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Current status and challenges for the manufacturing industry Future policy directions <a href="https://www.meti.go.jp/shingikai/sankoshin/seizo_sangyo/pdf/014_04_00.pdf">https://www.meti.go.jp/shingikai/sankoshin/seizo_sangyo/pdf/014_04_00.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Hydrogen utilization in steelmaking processes" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_05_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_05_randd.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Decarbonization of thermal processes in the manufacturing sector" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_20_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_20_randd.pdf</a></li> </ul>

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
	5.2: Facilitating introduction of hydrogen and ammonia	<ul style="list-style-type: none"> <li>- Building supply chain both domestically and internationally</li> <li>- Research and development as well as the introduction support of production and usage of hydrogen derived from excess renewable energy sources</li> </ul>	<ul style="list-style-type: none"> <li>- Initiatives to facilitate the introduction of hydrogen and ammonia are considered to be necessary technologies for both the energy supply side (energy conversion sector) and the energy demand side (mainly industrial sector). In the establishment of supply chains (production, transport and utilization) for hydrogen and ammonia utilization, the establishment and cost-cutting of production technologies (e.g., production of green hydrogen by water electrolysis using renewable energy) to secure the supply volume for the expected demand to make it commercially available as a decarbonized fuel. This is considered to be an important initiative in facilitating the introduction and utilization of hydrogen and ammonia. The main focus here is on large-scale supply and cost-cutting.</li> <li>- The planned domestic introduction of hydrogen and ammonia is as follows: <ul style="list-style-type: none"> <li>2030 Hydrogen: 3 million tonnes; Ammonia: 3 million tonnes (approx. 0.5 million tonnes of hydrogen equivalent)</li> <li>2050 Hydrogen: 20 million tonnes; Ammonia: 30 million tonnes (approx. 5 million tonnes of hydrogen equivalent)</li> </ul> </li> <li>- The major assessment criteria are the establishment of the supply chain necessary to realize the above-mentioned domestic introduction volumes and projects that enable supply costs to be equivalent to fossil fuels, i.e., below JPY 30/Nm<sup>3</sup> in 2030 and below JPY 20/Nm<sup>3</sup> in 2050.</li> </ul> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Establishment of a large-scale hydrogen supply chain" <a href="https://www.meti.go.jp/press/2021/05/20210518005/20210518005-2.pdf">https://www.meti.go.jp/press/2021/05/20210518005/20210518005-2.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Establishment of a fuel ammonia supply chain" <a href="https://www.meti.go.jp/press/2021/09/20210914003/20210914003-b.pdf">https://www.meti.go.jp/press/2021/09/20210914003/20210914003-b.pdf</a></li> </ul>

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
	5.3: Carbon Recycling and CCS (Carbon Captured & Storage)	<ul style="list-style-type: none"> <li>- Support for research and development of Carbon Recycling fuel</li> </ul>	<ul style="list-style-type: none"> <li>- Initiatives to make available fuels that contribute to decarbonization, such as SAF (Sustainable Aviation Fuel), synthetic fuels and synthetic methane as carbon recycling (e.g., development of regulations and systems, coordination with international rules) are important for realizing decarbonization in the transport sector (which accounts for approximately 20% of emissions in Japan) etc.</li> <li>- CCS (Carbon Captured &amp; Storage) is to capture CO<sub>2</sub> that will remain to be emitted in the future and store it underground or elsewhere. Internationally, the introduction of CCS is recognized as a necessary step towards achieving carbon neutrality. Early actions are considered to be necessary to secure the amount of CCS storage indicated in the eligibility criteria and to establish domestic and international value chains and CCS markets.</li> <li>- The major assessment criteria include projects that develop and demonstrate control technologies to address feedstock variability*. There are no clear criteria for CCS at present, but projects that meet the above eligibility criteria through the Issuer's project evaluation and selection process are eligible.</li> </ul> <p>* The feedstocks for the production of synthetic fuels are waste materials from various applications (e.g., waste oil) etc., and the properties of the feedstocks fluctuate. Therefore, in order to improve the efficiency of carbon recycling, it is necessary to develop technologies such as temperature control during production and the adjustment of appropriate catalyst quantities in response to fluctuations in the properties etc. of the feedstocks.</p> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Development of fuel production technology using CO<sub>2</sub> etc."  <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_08_randd_set.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_08_randd_set.pdf</a></li> </ul>



Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Development of CO<sub>2</sub> separation and collection technologies" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_10_randd_set.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_10_randd_set.pdf</a></li> </ul>
<b>6 Environmentally sustainable management of living natural resources and land use, Circular economy</b>  	6.1: Food, agriculture, forestry, and fisheries industry	<ul style="list-style-type: none"> <li>- Decarbonization of agriculture, forestry and fisheries</li> </ul>	<ul style="list-style-type: none"> <li>- As absorption source for greenhouse gases, forests, agricultural lands and seaweed beds of the food, agriculture, forestry, and fisheries industries play an essential role in achieving carbon neutrality by 2050 as well as for decarbonization and mitigation of environmental impacts.</li> <li>- There are no clear criteria for food, agriculture, forestry, and fisheries. However, projects that contribute to the above through the Issuer's project evaluation and selection process in accordance with the "Green Food System Strategy" and the "Green Food System Act" are eligible.</li> </ul> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Green Food System Strategy <a href="https://www.maff.go.jp/j/kanbo/kankyo/seisaku/midori/attach/pdf/index-10.pdf">https://www.maff.go.jp/j/kanbo/kankyo/seisaku/midori/attach/pdf/index-10.pdf</a></li> <li>- Green Food System Act <a href="https://www.maff.go.jp/j/kanbo/kankyo/seisaku/midori/houritsu.html#h_69877885961662471448330">https://www.maff.go.jp/j/kanbo/kankyo/seisaku/midori/houritsu.html#h_69877885961662471448330</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Development of CO<sub>2</sub> and other reduction and absorption technologies for food, agriculture, forestry, and fisheries" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_18_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_18_randd.pdf</a></li> </ul>
	6.2: Resource circulation	<ul style="list-style-type: none"> <li>- Investment to accelerate resource circulation of plastics, metals, sustainable aviation fuel (SAF), etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Initiatives to avoid at most additional CO<sub>2</sub> emissions in the supply chain in the entire society through investments to introduce equipment etc. for low and decarbonized resources (e.g., recycled materials and bio-materials), material-saving resources and services such as leasing and sharing (investments in the arterial industry), and investments to introduce equipment etc. for recycling and re-use of plastics, metals (including battery materials, solar panels, etc.), biomass waste (e.g., production and supply of SAF) (investments in the venous industry) are considered to be important to minimize energy use in the future.</li> </ul>

Eligibility criteria		Representative nominated UoPs (eligible projects)	Overview of DNV's Opinion (including the Issuer's specific measures and key assessment criteria)
Categories (GBP classification)	Sub-categories		
			<p>- The major assessment criteria include projects that establish technologies to realize waste incineration facilities based on CO<sub>2</sub> separation and collection that meet a stable collection rate of 90% or more of the carbon contained in waste under specified conditions by 2030.</p> <p>Reference links:</p> <ul style="list-style-type: none"> <li>- Research, development and social implementation plan for the GI Fund project "Development of production technology of plastic raw materials using CO<sub>2</sub> etc." <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_07_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_07_randd.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Development of fuel production technology using CO<sub>2</sub> etc." <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_08_randd_set.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_08_randd_set.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Development of manufacturing technology for concrete etc. using CO<sub>2</sub>" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_09_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_09_randd.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Development of CO<sub>2</sub> separation and collection technologies etc." <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_10_randd_set.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_10_randd_set.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Achieving carbon neutrality in the field of waste and resource circulation" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/gif_11_randd2.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/gif_11_randd2.pdf</a></li> <li>- Research, development and social implementation plan for the GI Fund project "Promotion of carbon recycling using CO<sub>2</sub> as a direct feedstock through biomanufacturing technology" <a href="https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_19_randd.pdf">https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_19_randd.pdf</a></li> </ul>

- DNV has confirmed that the Issuer plans to allocate all amount of the net proceeds, excluding expenses, of the entire amount of proceeds from the Climate Transition Bond to new investment and refinancing for eligible projects that meet the Issuer's investment plan to implement its Transition Strategy. With regard to refinancing, eligible projects are those to which the proceeds were disbursed in the previous fiscal year retrospectively from the date of the financing.
- The eligibility criteria and eligible projects focus on green projects classified under GBP/GBGLs (e.g., in the renewable energy sector and the energy-saving sector (energy efficiency etc.)) and also include activities that need to be addressed at present in order to achieve carbon neutrality in the future (e.g., initiatives for phasing out fossil fuel use, the utilization of nuclear power, etc.) like the eligibility criteria classified as low-carbon and decarbonized energy.
- Green projects classified under GBP/GBGLs and projects that meet the eligibility criteria classified as low-carbon and decarbonized energy are eligible projects that directly or indirectly support projects that result in significant GHG emission reductions as exemplified by CTFH/CTFBG and GBP/GBGLs or that contribute to achieving carbon neutrality, which contribute to achieving national targets, roadmaps for individual industries, etc. Eligible projects have been assessed for meeting the criteria set out by the Issuer and for having clear environmental benefits on the Transition Strategy, and are expected to contribute to the SDGs.
- The Issuer is also required to be aware that some eligible projects that meet the criteria at the time of the Framework assessment, such as PHEVs, may need to be reassessed due to future revisions of the criteria (e.g., stricter thresholds or revised assessment boundaries). It is expected that the project will be assessed to ensure that it is an eligible project at the time of issuance of the transition bond by monitoring international trends, reviewing the assessment criteria in a timely manner, etc.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-1 that "the issuer must use the proceeds for eligible projects that provide clear environmental benefits\*."

- \* Proceeds from transition bonds are also allowed to be allocated to related projects necessary to realize Just Transition and the transition strategy.



## Use of proceeds classified under GBP

- Renewable energy**
- Pollution prevention and control
- Conservation of terrestrial and aquatic biodiversity
- Sustainable water resources and wastewater management
- Circular economy adapted products, production technologies and processes (circular economy)**
- Other: Low-carbon and decarbonized energy (item set out in the Issuer's Climate Transition Bond)**
- Projects/eligibility criteria that are undetermined at the time of finance execution, but have been confirmed through appropriate processes to fit into the GBP classification or other eligibility areas not currently listed in the GBP, may be included.**
- Energy efficiency (energy savings)**
- Environmentally sustainable management of living natural resources and land use**
- Clean transportation**
- Adaptation to climate change
- Green buildings with locally, nationally or internationally recognized standards or certifications

## GBP-2. Process for Project Evaluation and Selection

- The Issuer selects projects based on an assessment that they meet the GBP-1 eligibility criteria and the criteria required for an eligible project, and that they have clear environmental benefits in the timeline required by the roadmap. Eligible projects are planned to cover a range of activities such as technology development/research and development, demonstration tests, support for equipment and system installation (subsidies), etc., according to the timeline until the project is socially implemented.
- Specifically, eligible projects to which the proceeds will be allocated will be confirmed by the ministries in charge of the projects to be consistent with the "GX Promotion Strategy" and conform to the selection criteria set out in GBP-1 for each eligibility criterion. Eligible projects that are found to be in conformity will be re-confirmed by the "Intergovernmental Committee on the Issuance of GX Economy Transition Bonds," consisting of Director-Generals, and relevant ministries and agencies as necessary, and finally reported to the "GX Implementation Council," chaired by the Prime Minister. Each eligible project is determined annually by a resolution of the Diet as part of the governmental budget.

The members of the above Intergovernmental Committee are as follows:

- ◆ Cabinet Secretariat
  - ◆ Financial Services Agency
  - ◆ Ministry of Finance
  - ◆ Ministry of Economy, Trade and Industry
  - ◆ Ministry of the Environment
- When selecting eligible projects, the Issuer will ensure to take negative environmental and social impacts into account (including the necessary procedures in the region where the project is to be implemented) and that the proceeds are not allocated to projects related to the following exclusion criteria.

<Exclusion criteria>

- ◆ Businesses with the purpose of manufacture or distribution of inhumane weapons such as nuclear, chemical, biological and other weapons of mass destruction or anti-personnel landmines, or businesses engaged in the manufacture of products or provision of services supporting manufacture or sale of inhumane weapons such as nuclear, chemical, biological and other weapons of mass destruction or anti-personnel landmines;
- ◆ Businesses related to coal mining, refining or transportation;
- ◆ Businesses related to the ownership or operation of gambling facilities or businesses;



- ♦ Businesses related to forced labor or businesses related to unfair trade, bribery, corruption, extortion, embezzlement or other inappropriate relationships that do not comply with the laws and regulations of the country where the business is located;
- ♦ Businesses related to transactions that could cause human rights, environmental or other social problems.
- DNV has confirmed that the Issuer assesses and selects projects after confirming negative impacts (including exclusion criteria) following a standard process. However, in order to assess and select projects as Transition Bond eligible projects, including those, DNV recommends to make a common documentation as a robust process for operation that takes into account Just Transition, avoidance of lock-in, additional positive environmental impacts, etc., as required specifically for the Transition Bond as shown in the CTFH/CTFBG.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-2 that “the issuer must outline the process for determining the eligibility of the project and outline how the project considers its impact on the targets.”

### Evaluation and selection

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> <b>The project is consistent with the achievement of the Issuer’s environmental contribution targets.</b>                                | <input checked="" type="checkbox"/> <b>The project has been assessed and selected through a documented process that demonstrates that it meets the defined eligibility category.</b>                 |
| <input checked="" type="checkbox"/> <b>The project is an eligible project as the use of green finance proceeds and is transparent.</b>                                       | <input checked="" type="checkbox"/> <b>The project has been assessed and selected through a documented process to identify and manage potential ESG risks associated with the project execution.</b> |
| <input checked="" type="checkbox"/> <b>The project is evaluated and selected based on published criteria abstracts (green project with existing referenceable criteria).</b> | <input type="checkbox"/> Other ( <i>please specify</i> ):  |

### Information on responsibility and accountability

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>Evaluation/selection criteria based on advice or verification by an external body</b> | <input checked="" type="checkbox"/> <b>Evaluation within the organization</b> |
| <input type="checkbox"/> Other ( <i>please specify</i> ):  |   |

**GBP-3. Management of Proceeds**

**Management of allocation of proceeds:**

- The Issuer has specified the Ministry of Economy, Trade and Industry (METI) to be responsible for the allocation and management of proceeds using an internal management system (Government Accounting System, ADAMS II, etc.). The proceeds of the Climate Transition Bond will be received in the Energy Supply and Demand Account of the Special Account for Energy Measures and will be managed separately from other accounts.
- Specifically, the procurement is carried out by the Ministry of Finance, and after payment to the Accounting Office of the Agency for Natural Resources and Energy, revenue and expenditure management is carried out using an internal management system. The Accounting Office of the Agency for Natural Resources and Energy manages the allocation of proceeds through the allocation to the private sector etc. via the responsible office and ministry.
- The management status of the proceeds allocation can be tracked on an eligible project basis as “costs for measures to promote a smooth transition to a decarbonized growth economic structure” using an internal management system from the issuance of the transition bond until the redemption.
- The Issuer intends that the proceeds will be allocated to projects that have been put into operation (commenced operation) or to which proceeds have been allocated in the fiscal year that includes the date of fundraising, after the fiscal year and in the previous year.

**Management of unallocated proceeds:**

- Until the proceeds are allocated to eligible projects, all unallocated proceeds will be managed as cash and will not be used for other temporary investments (including green investments) etc.

The Issuer will be subject to annual inspections by the Board of Audit of Japan of its proceeds management results. During the inspections by the Board of Audit of Japan, the climate transition bond-specific management process required under GBP-3 will also be inspected.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-3 that “the issuer must track and manage the proceeds (and, where necessary, establish and manage under appropriately classified portfolio units) and disclose how unallocated proceeds are treated.”



### Tracking and management of proceeds:

- Some or all of the proceeds from the Climate Transition Bond that are planned to be allocated are systematically distinguished or tracked by the Issuer.**
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- Other: Unallocated proceeds are managed in cash.**

### Additional disclosure:

- |  |  |
|--|--|
| <input type="checkbox"/> Allocations to future investments only                    | <input checked="" type="checkbox"/> <b>Allocations to both existing and future investments</b> |
| <input checked="" type="checkbox"/> <b>Allocations to individual disbursements</b> | <input checked="" type="checkbox"/> <b>Allocations to a portfolio of disbursements</b>         |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds   | <input type="checkbox"/> Other ( <i>please specify</i> ):                                      |

### GBP-4. Reporting

DNV has confirmed that the Issuer intends to report the following on an annual basis on the Government’s website as proceeds allocation reporting and impact reporting until the Issuer has fully allocated the proceeds from the Climate Transition Bond.

The Issuer intends to work on to strengthen organization’s commitments and gain market recognition for the content of the upfront investment by additionally disclosing the mid-term strategy and the expected environmental benefits as well as the allocation status of proceeds and the direct impacts (environmental benefits) of eligible projects to which the allocation has been made.

In the event of a significant change in circumstances in eligible projects (e.g., significant process changes, suspension/discontinuation, changes in specifications that have a significant impact on the environmental benefits), the Issuer will disclose it even after the completion of the proceeds allocation.

DNV recommends that impact reporting should not be limited within the period up to the completion of the proceeds allocation, but also after the completion of proceeds allocation until milestones are reached that are considered to be important, such as the completion of the project or the achievement of expected environmental benefits. DNV also recommends to establish and operate an appropriate reporting period as a documented process as an internal arrangement of the Issuer.

#### Allocation status reporting:

- The Issuer will report on the allocation status of proceeds on an annual basis on the Government’s website, at least until the full amount of the proceeds has been appropriated. Allocation status reporting will be on a project-by-project or eligibility criteria basis and will include the following items, taking into account confidential obligations.





- ◆ Allocated amount and unallocated balance
- ◆ Estimated amount of the proceeds allocated in the fiscal year prior to the issuance

**Impact reporting (environmental benefits reporting):**

- The Issuer will, at least until the full amount of proceeds has been allocated, report on the items of major environmental benefits (mainly GHG emission reduction effects) on a project-by-project or eligibility criteria basis (direct and indirect benefits and expected future benefits) and progress status of projects on an annual basis on the Government's website, taking into account confidential obligations and the extent practicable.
- In the event of a significant change in circumstances in eligible projects (e.g., significant process changes, suspension/discontinuation, changes in specifications that have a significant impact on the environmental benefits) during the redemption period of the bond after allocations have commenced, the Issuer will disclose it in a timely manner or through reporting.
- DNV recommends that the impact reporting is conducted in comparison with what the Issuer actively discloses about specific environmental benefit indicators to be used for each eligibility criterion, representative project, etc. and the calculation method (including baseline conditions), where practicable, in the statutory documents for each bond issuance etc.

Based on the above, DNV judges that the Climate Transition Bond satisfies the element required by GBP-4 that “the issuer shall, at least, report to bond investors regarding the allocation status of proceeds and quantitative or qualitative performance (environmental benefits) of eligible projects.”



### Allocation status reporting:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <b>Project-by-project</b> | <input checked="" type="checkbox"/> <b>On a project portfolio basis</b> |
| <input type="checkbox"/> Linkage to individual bond(s)        | <input type="checkbox"/> Other ( <i>please specify</i> ):               |

#### Information reported:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>Allocated amounts</b> | <input type="checkbox"/> Green financed share of total investment |
| <input type="checkbox"/> Other ( <i>please specify</i> ):    |   |

#### Frequency:

- |   |                                      |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> <b>Annual</b>         | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |                                      |

### Impact reporting (environmental benefits reporting):

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <b>Project-by-project</b> | <input checked="" type="checkbox"/> <b>On a project portfolio basis</b> |
| <input type="checkbox"/> Linkage to individual bond(s)        | <input type="checkbox"/> Other ( <i>please specify</i> ):               |

#### Frequency:

- |   |                                      |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> <b>Annual</b>         | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |                                      |

#### Information reported (expected or ex-post):

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>GHG emissions/savings</b> | <input type="checkbox"/> Energy savings |
|--|---|

- Other ESG indicators (*please specify*):**

**According to project progress and other properties of each eligibility criterion or eligible project**

### Means of disclosure

- |  |  |
|--|--|
| <input type="checkbox"/> Information published in financial report (Integrated Report)   | <input type="checkbox"/> Information published in sustainability report                            |
| <input type="checkbox"/> Information published in ad hoc documents   | <input checked="" type="checkbox"/> <b>Other (<i>please specify</i>): The Government's website</b> |
| <input type="checkbox"/> Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review) |  |

### External review (post-issuance periodic review of the Climate Transition Bond)

The Issuer will obtain an external review on an annual basis until the proceeds have been fully allocated in order to increase certainty (consistency) and objectivity of the ongoing compliance of the Climate Transition Bond with the relevant principles, guidelines and other required elements.

## VII. Assessment Conclusion

On the basis of the information provided by the Issuer and the work undertaken, it is DNV's opinion that the Framework meets the criteria established in the Protocol, and that it is aligned with the following stated definition or purpose of 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.

7 November 2023



**Thomas Leonard**

Head of Section, Sustainability Services  
Supply Chain & Product Assurance  
DNV Australia, New Zealand and Southeast Asia



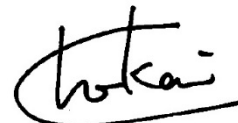
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### About DNV

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 Climate Transition Bond Eligibility Criteria and Representative Nominated Use of Proceeds (Eligible Projects)

The representative nominated use of proceeds (eligible projects) shown in the table have been assessed for eligibility by the Issuer at the time of the Framework assessment (as of October 2023). Future issuances of transition bonds based on the Framework may include, in addition to the representative nominated use of proceeds (eligible projects) shown in the table, eligible projects of which eligibility has been additionally confirmed by the Issuer in accordance with the “Process for Project Evaluation and Selection” described in the Framework and, if necessary additional assessments will be made in a timely manner by an external evaluation body.

No.	Eligibility criteria		Representative Nominated use of proceeds (eligible projects)	
	Categories (GBP classification)	Sub-categories		
1	Energy efficiency	Promotion of thorough energy efficiency improvement	1.1: Restructuring the manufacturing industry (fuel and feedstocks transition)	Subsidy system for energy-saving measures in the industrial sector <ul style="list-style-type: none"> <li>- Decarbonization of factories, energy savings</li> <li>- Fuel and feedstock transition measures in five major industries etc.</li> </ul>
			1.2: Houses and buildings	Subsidy system for energy-saving measures in the household sector <ul style="list-style-type: none"> <li>- Subsidy for energy-saving refurbishment of existing buildings</li> <li>- Subsidy for low-carbon housing (life cycle) technology development etc.</li> </ul>
			1.3: Digital investment aimed at decarbonization	Facilitating the development of and investment in energy efficient semiconductors, photonics electronics convergence technologies, etc.
		1.4: Battery industry	Investments in plants manufacturing batteries together with their material and components	
2	Renewable energy	2.1: Making renewable energy a major power source	Next-generation solar cells (perovskite)	
			Floating offshore wind	
			Costs of basic surveys and maintenance of submarine DC transmission etc.	

No.	Eligibility criteria		Representative Nominated use of proceeds (eligible projects)
	Categories (GBP classification)	Sub-categories	
			Infrastructure facilities (costs of introducing renewable energy in diverse infrastructure spaces such as airports, roads, dams and sewers)
		2.2: Infrastructure	Support for the establishment of self-owned line microgrids
3	Low-carbon and decarbonized energy  *Classification set out in the Issuer's Climate Transition Bond	3.1: Establishing electricity and gas markets to achieve carbon neutrality	Research and development towards zero-emission thermal power
		3.2: Utilization of nuclear power	Research and development of next-generation advanced reactors with built-in new safety mechanisms
4	Clean transportation	4.1: Clean transportation (GX in transport sector)	Support for the introduction of next-generation vehicles Developing demonstration aircraft by 2030s and spreading the use of zero-emissions ships, etc.
		4.2: Resource circulation	Decarbonization of fuels (SAF, synthetic fuels, etc.)
		4.2: Infrastructure	Introduction of Carbon Neutral Ports (CNP) and clean transportation at airports and other infrastructure facilities
5	Circular economy adapted products, production technologies and processes	5.1: Restructuring the manufacturing industry (fuel and feedstocks transition)	<ul style="list-style-type: none"> <li>- Development and introduction of innovative technologies such as hydrogen reduction steelmaking</li> <li>- Conversion to Carbon-Recycling</li> </ul>
		5.2: Facilitating the introduction of hydrogen and ammonia	<ul style="list-style-type: none"> <li>- Building supply chain both domestically and internationally</li> <li>- Research and development as well as the introduction support of production and usage of hydrogen derived from excess renewable energy sources</li> </ul>
		5.3: Carbon Recycling and CCS	Support for research and development of Carbon Recycling fuel
6	Environmentally sustainable management of living natural resources and land use, Circular economy	6.1: Food, agriculture, forestry, and fisheries	Decarbonization of agriculture, forestry and fisheries
		6.2: Resource circulation	Investment to accelerate resource circulation of plastics, metals, sustainable aviation fuel (SAF), etc.



## Schedule-2 Climate Transition Finance Eligibility Assessment Protocol

The following checklists are the DNV assessment protocol created for the eligibility assessment based on the disclosure requirements of the CTFH.

The “Confirmed documents” in “Work Undertaken” column include public or non-public documents (internal document of the Issuer), information, etc. and are provided to DNV by the Issuer as evidence for determining the eligibility.

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1	Issuer’s Climate Transition Strategy and Governance	<p>The green, sustainability or sustainability-linked financing should be directed toward enabling an issuer’s GHG emissions reduction strategy in alignment with the goals of the Paris Agreement.</p> <p><i>Recommended information and indicators:</i></p> <ul style="list-style-type: none"> <li>• a long-term, science-based target to align with the goals of the Paris Agreement;</li> <li>• relevant and credible interim science-based targets in the short and medium-term on the trajectory towards the long-term goal, in line with the relevant regional, sector, or international climate change scenarios;</li> <li>• disclosure on an issuer’s transition plan or climate transition strategy. This should include specific itemisation of the main levers towards GHG emissions reduction, such as a detailed capital expenditure (CapEx) plan and relevant technological implications (i.e.,</li> </ul>	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Strategic Energy Plan</li> <li>- Long-term strategy as a growth strategy based on the Paris Agreement</li> <li>- Japan’s NDC</li> <li>- Sector-specific technology roadmap</li> <li>- GX Implementation Council documents</li> </ul> <p>Interview with the Issuer</p>	<p>The Climate Transition Bond is a plan implemented with a strategy and governance to achieve Japan’s 2050 carbon neutrality in line with the goals of the Paris Agreement and a science-based reduction of 46% of GHG emissions in FY2030 (compared to FY2013).</p> <ul style="list-style-type: none"> <li>i) The Issuer has explained that the 2050 carbon neutrality is consistent with the goals of the Paris Agreement.</li> <li>ii) The Issuer has set a mid-term goal of a 46% reduction in GHG emissions in FY2030 (compared to FY2013), which is the intersection of the year 2030 with the year 2050 on a trajectory linearly interpolated from FY2013 emissions to 2050 carbon neutrality, and is judged to have a scientific basis. In addition, the mid-term goal has been set in the Plan for Global Warming Countermeasures as ambitious targets and specific initiatives as reduction rates for each industrial category that emits greenhouse gases, and ensuring their implementation brings relevance and credibility for achieving the goal.</li> <li>iii) The Issuer has associated in its roadmap an investment program of approximately JPY 20 trillion in governmental support over a 10-year period from FY2023 and an overall public-private investment</li> </ul>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		<p>amounts to be spent, what carbon cost is considered for implementing such CapEx programme, operational impacts, regulatory considerations, etc.);</p> <ul style="list-style-type: none"> <li>• clear oversight and governance of an issuer’s climate transition strategy, including management/board level accountability; and</li> <li>• evidence of a broader sustainability strategy to mitigate relevant environmental and social externalities, including ‘just transition’ considerations where appropriate, and contributions to the UN Sustainable Development Goals (UN SDGs).</li> </ul>		<p>amount of over JPY 150 trillion with the transition plan and Transition Strategy. The main instruments for GHG emission reduction are organized in the Plan for Global Warming Countermeasures and the roadmap.</p> <p>iv) The Issuer has established a structure and mechanism to promote the Transition Strategy as a country. The above plans and strategies, which form the basis for the implementation of the Transition Strategy, will be updated annually or through periodic follow-ups and revisions. These GX initiatives will be discussed with relevant ministers and experts at the GX Implementation Council chaired by the Prime Minister, where the policy direction will be decided. This means that the GX is judged to have clear oversight and governance with accountability by the state.</p> <p>v) With regard to direct or indirect contributions to the SDGs, the Issuer has further categorized its decarbonization initiatives towards the GX, which are classified into 14 categories, into the six eligibility criteria shown in Table-3, each organizing areas of contribution to the SDGs. Just Transition is also stipulated in the “Basic Policy for the Realization of GX” to be considered as a society-wide promotion of GX. The above indicates that the Issuer should work to minimize negative environmental and social impacts (negative external effects) that may occur as a result of the implementation of the GX by contributing to the SDGs and taking into account Just Transition.</p>



Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
2	Business model environmental materiality	<p>The climate transition strategy should be relevant to the environmentally material parts of an issuer’s business model, taking into account potential future scenarios which may impact current determinations concerning materiality.</p> <p><i>Recommended information and indicators:</i></p> <p>Discussion on the materiality of the planned climate transition strategy may:</p> <ul style="list-style-type: none"> <li>• be disclosed in the form of a materiality matrix made publicly available by an issuer or be covered in an issuer’s annual reports; and</li> <li>• address the materiality of climate-related eligible projects and/or KPI(s) on the overall emissions profile of an issuer.</li> <li>• Where Scope 3 emissions are expected to be material but are not yet identified or measured, a timeline for reporting should be disclosed.</li> </ul>	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Strategic Energy Plan</li> <li>- Long-term strategy as a growth strategy based on the Paris Agreement</li> <li>- Japan’s NDC</li> <li>- Sector-specific technology roadmap</li> <li>- GX Implementation Council documents</li> </ul> <p>Interview with the Issuer</p>	<p>In developing the Transition Strategy, the Issuer has positioned GX as an important industrial and energy policy that shifts the industrial and social structure to a clean energy focus in order to ensure a stable energy supply for business activities and people’s lives, promote decarbonization and achieve economic growth. The Issuer has developed roadmaps for key emitting sectors on how to reduce GHG emissions, consistent with various governmental measures and scenarios (see e.g., IEA, IPCC, SBTi).</p> <ul style="list-style-type: none"> <li>i) Materiality is not disclosed or described as a matrix, but is disclosed through various plans, strategies, laws, etc., which are also described in this report. Therefore, GX, the Transition Strategy to shift the industrial and social structure to a clean energy focus in order to achieve a stable energy supply, promote decarbonization and economic growth in Japan is considered to be an important industrial and energy policy.</li> <li>ii) Eligible projects (eligible businesses) related to climate change and KPIs (quantitative reduction targets set for each industry) define how the country’s emission profile is to be reduced. Eligible projects and initiatives to achieve the KPIs are important milestones for the Issuer to achieve its goals.</li> <li>iii) GHG emissions cannot be directly organized as Scope 3 in the assessment of GHG emissions of the Issuer or Japan. When GHG emissions corresponding to Scope 3 are taken as emissions in the entire Japanese society and assessed, it has been confirmed that the</li> </ul>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
				<p>coverage ratio is 100%, including the scope and target gases, in accordance with IPCC guidelines. In addition, the scope for GHG emission calculation has been identified for each industry and GHG emissions are measured on an annual basis and reported on the Government's website.</p>
3	<p>Climate transition strategy and targets to be science-based</p>	<p>An issuer's climate transition strategy should reference science-based targets and transition pathways. There is scientific guidance around the required rate of GHG emission reductions (the "GHG emissions reduction trajectory") to align the global economy with the goals of the Paris Agreement.</p> <p>The planned transition trajectory should:</p> <ul style="list-style-type: none"> <li>• be quantitatively measurable and aligned with the latest available methodology;</li> <li>• be aligned with, benchmarked, or otherwise referenced to recognised third-party, science-based trajectories, where such trajectories exist; when third-party trajectories are not available, consider industry peer comparison and/or internal methodologies/historical performance;</li> <li>• be publicly disclosed (ideally in mainstream financial filings), including interim targets; and</li> </ul>	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Strategic Energy Plan</li> <li>- Long-term strategy as a growth strategy based on the Paris Agreement</li> <li>- Japan's NDC</li> <li>- Sector-specific technology roadmap</li> <li>- GX Implementation Council documents</li> </ul> <p>Interview with the Issuer</p>	<p>The Issuer's Transition Strategy is defined by a scientifically-based CO<sub>2</sub> reduction target (reduction rate) and pathway consistent with the Paris Agreement. Specifically, a 46% reduction (compared to FY2013) is set as a mid-term goal for FY2030, with 2013 as the base year and 2050 as a linearly interpolated carbon-neutral trajectory.</p> <ul style="list-style-type: none"> <li>i) The Transition Strategy is quantitatively measurable in terms of GHG emissions and absorptions. Specifically, the scope (target sectors etc.) and target gases (100% coverage) are consistent with IPCC guidelines and in line with established calculation methods.</li> <li>ii) The Transition Strategy has set a mid-term goal of a 46% reduction (compared to FY2013) for FY 2030, which is on a linearly interpolated trajectory with 2013 as the base year and 2050 carbon neutrality.</li> <li>iii) The Transition Strategy has been published with a mid-term target of 46% reduction in FY2030 (GHG emissions and absorptions of 0.76 billion t-CO<sub>2</sub>).</li> <li>iv) Although the targets set out in the Transition Strategy have not been independently assured or</li> </ul>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		<ul style="list-style-type: none"> <li>be supported by independent assurance or verification.</li> </ul> <p><i>Strongly recommended information and indicators:</i></p> <ul style="list-style-type: none"> <li>short, medium, and long-term GHG emission reduction targets aligned with the Paris Agreement;</li> <li>baseline year and historic emissions (including absolute emissions, where intensity metrics are the main indicator);</li> <li>scenario utilised and methodology applied (e.g., ACT, SBTi, IEA etc.). When third-party trajectories are not available, industry peer comparison and/or internal methodologies/historical performance;</li> <li>GHG emission objectives covering all scopes and most relevant sub-categories (Scopes 1, 2 and 3);</li> <li>targets formulated in either intensity or absolute terms, noting, that where intensity targets are used, projections on the change to absolute emissions should also be provided; and</li> <li>where applicable, use of carbon capture technology as well as of high-quality and high-integrity carbon credits, and their relative contribution</li> </ul>		<p>verified, the publicly available information (specific reduction amounts per sector and action plans) suggests that it is a reasonable strategy.</p> <p>-----</p> <ul style="list-style-type: none"> <li>v) The Issuer has set mid- and long-term GHG emission reduction goals consistent with the Paris Agreement. Specifically, the Issuer has set 2013 as the base year, with a mid-term target of a 46% reduction in FY2030 and a long-term target of carbon neutrality in 2050.</li> <li>vi) In addition to the base year (FY2013), the Issuer has disclosed past emission data (including breakdown) since 1990. Note that emissions from FY1990 to FY2013 (base year) ranged between a minimum of 1.249 billion t-CO<sub>2</sub> (FY2009) and a maximum of 1.396 billion t-CO<sub>2</sub> (FY2012).</li> <li>vii) The Transition Strategy sets a mid-term goal of a 46% reduction (compared to FY2013) for FY2030, which is on a linearly interpolated trajectory with 2013 as the base year and 2050 carbon neutrality.</li> <li>viii) The Transition Strategy is quantitatively measurable in terms of GHG emissions and absorptions. Specifically, the scope (target sectors etc.) and target gases (100% coverage) are consistent with IPCC guidelines and in line with established calculation methods.</li> <li>ix) The Transition Strategy is a target formulated in absolute GHG values (t-CO<sub>2</sub>).</li> </ul>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		<p>to the GHG emissions reduction trajectory in line with best industry practices (e.g., SBTi, VCMi and ICVCM).</p>		<p>x) In addition to the absorption of greenhouse gases by forests, agricultural soil, urban greening, etc. (FY2021: 0.048 billion t-CO<sub>2</sub>, approx. 4% of emissions), the Issuer will utilize the bilateral credit scheme (JCM; Joint Crediting Mechanism), aiming for a cumulative international emission reduction and absorption of around 0.1 billion t-CO<sub>2</sub> by FY2030 through public-private partnerships. The Issuer plans to count the credits acquired by Japan appropriately for the achievement of Japan's NDC.</p>
4	Implementation transparency	<p>Market communication regarding the offer of a GSS financing instrument intended to fund an issuer's climate transition strategy should also be transparent, to the extent practicable, on the underlying investment program including capital and operational expenditures (CapEx and OpEx).</p> <p><i>Recommended information and indicators:</i></p> <ul style="list-style-type: none"> <li>• CapEx roll-out plan consistent with the overall climate transition strategy and climate science and discussion of how it informs CapEx decision-making within the organisation;</li> <li>• phase-out plan regarding activities/products incompatible with the climate transition strategy (when such activities or products are significantly harmful or display levels of performance inconsistent with</li> </ul>	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Strategic Energy Plan</li> <li>- Long-term strategy as a growth strategy based on the Paris Agreement</li> <li>- Japan's NDC</li> <li>- Sector-specific technology roadmap</li> <li>- GX Implementation Council documents</li> <li>- Assessment documents</li> </ul>	<p>The Issuer has disclosed the basic investment program for the implementation of the Transition Strategy. Specifically, the Issuer plans to provide approximately JPY 20 trillion in governmental support (The GX Economy Transition Bonds) as upfront investment support* over a 10-year period starting in FY2023, as well as over JPY 150 trillion in public-private investment over the same period.</p> <p>The investment program has been disclosed in the Framework and the "Basic Policies for the Realization of GX" as the information necessary for dialogue with the market, and is transparent.</p> <p>i) The major investment destinations of the GX Economy Transition Bonds are the "promotion of non-fossil energy (JPY 6-8 trillion)," "industrial restructuring and radical energy conservation in a combination of supply and demand (approximately JPY 9-12 trillion)," and "resource recycling and carbon fixation technologies (approximately JPY 2-4 trillion)." These decisions are made by the GX Implementation Council and the Cabinet Secretariat</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		<p>science-based GHG emission reduction trajectories);</p> <ul style="list-style-type: none"> <li>• green CapEx, for example those referenced under the eligible green project categories in the Green Bond Principles, as a percentage of total CapEx and how the ratio may be expected to evolve over time;</li> <li>• disclosure on the percentage of assets/revenues/ expenditures/divestments aligned to the various levers;</li> <li>• a qualitative and/or quantitative assessment of the potential locked-in GHG emission from an issuer’s key assets and products;</li> <li>• assumptions on the internal cost of carbon; and</li> <li>• disclosure on adverse impacts on the workforce, community and surrounding environment, and related strategies used to mitigate those negative impacts.</li> </ul>	<p>Interview with the Issuer</p>	<p>GX Office, based on sector-specific investment strategy proposals, including investment promotion measures, by relevant ministries and agencies and experts’ working groups.</p> <p>ii) The Transition Strategy has remaining activities that partially continue to use fossil fuels from an economic or asset utilization perspective at present for future decarbonization. However, the continued use of these activities is conditional on having a lock-in avoidance plan in place, which will be adjusted accordingly to match the GHG emission reduction trajectory by decarbonizing the fuels and feedstocks used, in addition to phase-out.</p> <p>iii) The investment destinations of the GX Economy Transition Bonds (approximately JPY 20 trillion) are mainly green projects classified under the GBP (e.g., the renewable energy sector and energy conservation (energy efficiency) sector), but also include activities that should be undertaken at present in order to achieve future carbon neutrality (e.g., initiatives for phasing out fossil fuel use, the utilization of nuclear power). GX aims to achieve carbon neutrality by 2050 and the share of allocations for green projects classified under the GBP is expected to increase.</p> <p>iv) The Issuer has presented initiatives classified into 14 categories in the roadmap and 22 cases as the way forward. The 22 cases are organized according to a timeline of what investments are planned for what projects (assets).</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
				<p>v) The Issuer has elaborately specified the scope (target sectors etc.) and target gases in accordance with the IPCC guidelines etc. for GHG emissions and absorptions in Japan. In addition, the details of the reduction plans for each scope and target gas are defined quantitatively and qualitatively. In particular, the Issuer has prepared roadmaps for GHG-intensive industries, set and disclosed the reduction policy up to 2050.</p> <p>vi) The Issuer has displayed the “Growth-oriented Carbon Pricing Initiative” as a key initiative of the GX Implementation Plan, and is working on accelerating GX investments and achieving carbon neutrality through “upfront investment support” and “measures to promote emission reductions (levy and emission trading scheme).” The carbon pricing (levy on carbon) has not yet been set as a concrete pricing system, but is scheduled to be introduced from FY2028.</p> <p>Reference: the GX-ETS (Emission Trading Scheme) is planned to be promoted under the following plan.</p> <p style="padding-left: 40px;">FY2023: Enforcement</p> <p style="padding-left: 40px;">FY2026: Full-scale operation of the emission trading market</p> <p style="padding-left: 40px;">FY2033: Phased introduction of pricing</p> <p>vii) The Issuer plans to ensure that Just Transition, mitigation of negative impacts and avoidance of lock-in are in place in the “Basic Policy for the Realization of GX” and in the selection process of investment destinations (eligible projects).</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
				<p>Specifically, the policy on Just Transition has been set out in the “Basic Policy for the Realization of GX” as “Promotion of GX in the entire society (section 5).” In addition, mitigation of negative impacts and avoidance of lock-in will be confirmed in the selection process of investment destinations (eligible projects) that they do not fall under the pre-defined exclusion criteria and that they are consistent with the GHG reduction roadmap.</p>



## Schedule-3 Green Bonds Principles (for Climate Transition Bonds with Use of Proceeds) Eligibility Assessment Protocol

The following checklists (GBP-1 to GBP-4) are the DNV assessment protocol created for the Climate Transition Bond (climate transition bond with use of proceeds) based on the requirements of the GBP. The “Confirmed documents” listed in the “Work Undertaken” column include public or non-public documents (internal document of the Issuer), information, etc. and are provided to DNV as evidence for determining the eligibility.

### GBP-1 Use of Proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1a	Types of funds	<p>The types of transition bond are classified into one of the following types defined by GBP.</p> <ul style="list-style-type: none"> <li>• (Standard) Transition Bond</li> <li>• Transition Revenue Bond</li> <li>• Transition Project Bond</li> <li>• Other</li> </ul>	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Sector-specific technology roadmap</li> </ul> <p>Interview with the Issuer</p>	<p>DNV has confirmed that the transition bond is classified in the following category through its assessment work.</p> <p>(Standard) Transition Bond*</p> <p>* Bonds issued to raise funds for projects. The redemption is not dependent on a specific financial resource, but is funded by the Issuer’s overall cash flow.</p>
1b	Transition Project Classification	<p>The key to a transition bond 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>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Sector-specific technology roadmap</li> </ul> <p>Interview with the Issuer</p>	<p>DNV has confirmed that the transition bond is necessary for the realization of the Issuer’s Transition Strategy, as set out in the Framework and Schedule-1, and is intended to be allocated to eligible businesses (projects) that have been selected through an appropriate process.</p> <p>If a project has been selected prior to the issuance of the transition bond, it will be disclosed in the statutory documents. If the project has not been selected prior to the issuance of the transition bond, it will be disclosed within the post-issuance reporting of the transition bond.</p> <p>Through the assessment, DNV concludes that the candidate eligible businesses (projects) have specific and true environmental benefits.</p>



Ref.	Criteria	Requirements	Work Undertaken	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.	Confirmed documents: <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Sector-specific technology roadmap</li> <li>- List of candidate use of proceeds</li> <li>- Assessment documents</li> </ul> Interview with the Issuer	DNV has confirmed that eligible businesses (projects) have clear environmental benefits, such as CO <sub>2</sub> emission reduction, and that the environmental benefits are reported on an annual basis. The environmental benefits of eligible businesses (projects) can be direct, such as the installation of equipment and systems, as well as indirect, such as research and development and demonstration tests, which contribute to future realization of the Transition Strategy. The Issuer is considering quantifying and presenting these to the extent practicable, taking into account the characteristics of eligible businesses (projects).
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, 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>- List of candidate use of proceeds</li> <li>- Assessment documents</li> </ul> Interview with the Issuer	DNV has confirmed that if the amount or percentage to be refinanced by the Issuer is known prior to the issuance of the transition bond, it will be disclosed in the statutory documents etc. DNV also confirmed that if it is not known prior to the issuance, the Issuer intends to disclose the approximate amount (or percentage) of the portion allocated as refinancing in the post-issuance reporting.

## GBP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements	Work Undertaken	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 qualified 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>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Sector-specific technology roadmap</li> <li>- List of candidate use of proceeds</li> <li>- Assessment documents</li> </ul> <p>Interview with the Issuer</p>	<p>DNV has confirmed that the Issuer has a process for determining the eligibility of eligible businesses (projects) to use the proceeds of the transition bond and that the overview is clearly stated in the Framework.</p> <ul style="list-style-type: none"> <li>• The Issuer has defined 14 eligibility criteria, where eligible projects are classified into 14 categories based on the type set out in the GX Roadmap as activities necessary to realize the Issuer's Transition Strategy. The eligibility criteria have developed assessment criteria (internal criteria) that are consistent with the GBP classification and the way forward set out in the roadmap.</li> <li>• Eligible projects that are candidate use of proceeds are selected on the basis of the assessment criteria (internal criteria) defined for each eligibility criterion and the basic conditions and priority assessment described above. In each issuance of the bond, the Issuer establishes a procedure by which eligible projects with appropriate allocation needs are selected as the actual use of the proceeds from among the candidate projects for the use of proceeds.</li> <li>• The environmental sustainability goals are linked to the various national environmental plans, strategies, etc. to which the GX Roadmap refers. Specifically, the Issuer is working to achieve decarbonization as well as industrial competitiveness and economic growth by transforming Japan's energy system (from fossil energy to clean energy) and industrial and social structures through the GX as an action against climate change by fulfilling its international commitments.</li> </ul>
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</p>	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> </ul>	<p>DNV has confirmed that, when selecting eligible projects, the Issuer will ensure to take negative environmental and social impacts into account (including the necessary procedures in the region where the project is to be implemented) and that the proceeds are not allocated to projects related to the separately specified exclusion criteria.</p>



Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		performance of the issuer's framework and environmental sustainability.	<ul style="list-style-type: none"> <li>- Sector-specific technology roadmap</li> <li>- List of candidate use of proceeds</li> <li>- Assessment documents</li> </ul> <p>Interview with the Issuer</p>	<p>DNV has also confirmed through the assessment that the Issuer will consider the negative impacts of projects at the project implementation stage and the impacts on the relevant supply chain, including Just Transition, mitigation of negative impacts (e.g., actions through environmental impact assessment) and avoidance of lock-in, as indicated in CTF-4.</p> <p>The above has been published in the Framework, roadmap, etc.</p>

## GBP-3 Management of Proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
3a	Tracking procedure-1	The net proceeds from transition bonds should be managed in sub-accounts, included in 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.	Confirmed documents: <ul style="list-style-type: none"> <li>- Framework</li> <li>- Assessment documents</li> </ul> Interview with the Issuer	DNV has confirmed that the allocation status of proceeds from the transition bond can be tracked and managed on an eligible project basis using the Ministry of Economy, Trade and Industry's internal management system as "costs for measures related to the promotion of a smooth transition to a decarbonized growth economic structure."
3b	Tracking procedure-2	During the transition bond redemption period, the balance of funds raised 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>- Assessment documents</li> </ul> Interview with the Issuer	DNV has confirmed that the Issuer will be subject to annual inspections by the Board of Audit of Japan of its proceeds management results. DNV has also confirmed that during the inspections by the Board of Audit of Japan, the climate transition bond-specific management process required under GBP-3 will also be inspected, including the management of the balance of proceeds required in 3b.
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.	Confirmed documents: <ul style="list-style-type: none"> <li>- Framework</li> <li>- Assessment documents</li> </ul> Interview with the Issuer	DNV has confirmed that the Issuer intends to manage all unallocated proceeds in cash until the decision is made to allocate the proceeds. DNV also confirmed that the unallocated proceeds will not be used for other temporary investments (including green investments) etc.

## GBP-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 issuer will consider each project at least once a year for projects to which the transition bond 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>- Assessment documents</li> </ul> <p>Interview with the Issuer</p>	<p>DNV has confirmed that the Issuer intends to include the following as disclosure information. The impact porting will be disclosed on an annual basis on the Government’s website on a project-by-project or eligibility criteria basis, taking into account confidential obligations and the extent practicable.</p> <p>[Allocation status reporting]</p> <ul style="list-style-type: none"> <li>• Allocated amount and unallocated balance</li> <li>• Estimated amount of the proceeds allocated in the fiscal year prior to the issuance</li> </ul> <p>[Impact reporting] (environmental benefits reporting)</p> <ul style="list-style-type: none"> <li>• Key environmental benefits (direct and indirect benefits related to GHG emission reduction etc., and benefits expected in the future)</li> <li>• Progress status of projects</li> </ul> <p>In the event of a significant change in circumstances in eligible projects (e.g., significant process changes, suspension/discontinuation, changes in specifications that have a significant impact on the environmental benefits) during the redemption period of the bond after allocations have commenced, the Issuer will disclose it in a timely manner or through reporting.</p>



## Schedule-4 Basic Guidelines on Climate Transition Finance Eligibility Assessment Protocol

The following checklists (from CTF-1 through CTF-4) are based on the four “disclosure elements” set forth in the “Basic Guidelines on Climate Transition Finance (CTFBG)” established by the Financial Services Agency, Ministry of Economy, Trade and Industry, and Ministry of the Environment in May 2021.

According to the CTFBG, “disclosure elements” are classified into the following three categories: “should”: ☉; “recommended”: ○; and “be considered/possible”: △. These expressions are defined as follows.

- Items described with the word “should” are basic elements that financial instruments labelled as transition finance are expected to have.
- Items described with the word “recommended” are elements that financial instruments labelled as transition finance are optimally recommended to have under these Guidelines although instruments which do not have these items can also be labelled as “transition”.
- Items described with the word “be considered” or “possible” are elements that these Guidelines provide as examples and interpretations although it is not considered problematic even if financial instruments labelled as transition finance do not have them.

There is a supplementary explanation in the margin of each checklist for the annotations in the “Disclosure Elements” column.

The documents listed in the “Work Undertaken” column are those confirmed as evidence, whose details (document names) are shown in the List of Reference Materials (Appendix-1).

The evidence used in the assessment work includes information obtained through discussions and interviews with the management of the Fundraiser in addition to the confirmed documents.

### CTFBG-1 Fundraiser’s Climate Transition Strategy and Governance

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
☉	1-a)	Financing through transition finance should aim to implement or incentivize the achievement of transition strategies <sup>9</sup> . Such strategies should incorporate a long-term target to align with the goals of the Paris Agreement, relevant interim targets on the trajectory towards the long-term	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Confirmed documents: - Framework - Basic Policy for the Realization of GX (roadmap) - Plan for Global Warming Countermeasures - Strategic Energy Plan	DNV has confirmed that the Issuer’s financing with the transition bond is aimed at achieving carbon neutrality in 2050 in accordance with the Transition Strategy, which is based on the Plan for Global Warming Countermeasures, NDC, etc.  The Issuer’s Transition Strategy is a 46% reduction in 2030 (compared to 2013) and carbon neutrality in 2050, consistent with the goals of the Paris Agreement. The specific plan, including a basic concept, future actions, targets and strategies, investments, regulations and

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings												
		goal, disclosure on the levers towards decarbonization, and fundraiser's strategic planning.		<ul style="list-style-type: none"> <li>- Long-term strategy as a growth strategy based on the Paris Agreement</li> <li>- Japan's NDC</li> <li>- Sector-specific technology roadmap</li> <li>- GX Implementation Council documents</li> <li>- Assessment documents</li> </ul> <p>Interview with the Issuer</p>	<p>institutions, and international strategies for each major initiative have been disclosed in the roadmap.</p> <table border="1"> <thead> <tr> <th>Fiscal year</th> <th>Targets</th> <th>CO<sub>2</sub> emissions</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>Base year</td> <td>1.408 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2030</td> <td>CO<sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)</td> <td>0.76 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2050</td> <td>Carbon neutrality</td> <td>0 billion t-CO<sub>2</sub></td> </tr> </tbody> </table>	Fiscal year	Targets	CO <sub>2</sub> emissions	2013	Base year	1.408 billion t-CO <sub>2</sub>	2030	CO <sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)	0.76 billion t-CO <sub>2</sub>	2050	Carbon neutrality	0 billion t-CO <sub>2</sub>
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<p>©</p> <p>(△)</p>	<b>1-b)</b>	<p>A transition strategy should serve to explicitly communicate the implementation of an issuer's strategy to transform the business model in a way which effectively addresses climate-related risks and contributes to achieving the goals of the Paris Agreement<sup>10</sup>. Transformation of a business model is not limited to initiatives as an extension of existing businesses but can also be transformation based on various other perspectives. It includes fuel conversion that achieves significant carbon and GHG reduction benefits, introduction of innovative</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Not Applicable</p>	Same as 1-a)	<p>DNV has confirmed that the transition bond is intended to fund a wide range of eligible businesses (projects) that focus on the Issuer's challenges and initiatives to address climate change, GX goals and initiatives and the Transition Strategy as set out in the roadmap, the Framework and Schedule-1 of this report.</p> <p>Specifically, all candidate eligible projects that meet the eligibility criteria and the criteria set out for each eligibility criterion shown in the table below and in Schedule-1 will be assessed as meeting the Transition Strategy. The proceeds from the transition bond will be allocated to one or more of the candidate eligible projects selected through an appropriate process. If an allocation is selected prior to the execution of the transition bond, it will be disclosed in statutory documents etc.</p>												

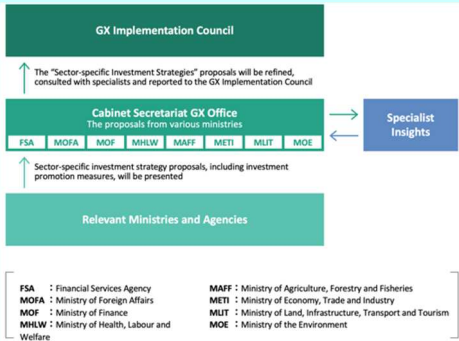
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		technologies, improvement of / changes in manufacturing processes and products, and development and provision of products and services in new fields.			<p>The eligibility criteria are organized as the content of initiatives aimed at achieving decarbonization as well as industrial competitiveness and economic growth by transforming Japan's energy system (from fossil fuel-based energy to clean energy) and industrial and social structure through GX.</p> <p>Through the assessment, DNV concludes that the eligibility criteria and the candidate eligible projects that meet the criteria defined for each eligibility criterion provide true environmental benefits.</p> <table border="1"> <thead> <tr> <th rowspan="2">No.</th> <th colspan="2">Eligibility Criteria</th> </tr> <tr> <th>Categories</th> <th>Sub-categories</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1</td> <td rowspan="3">Energy efficiency</td> <td>Promotion of thorough energy efficiency improvement</td> </tr> <tr> <td>Houses and buildings</td> </tr> <tr> <td>Restructuring the manufacturing industry (fuel and feedstocks transition)</td> </tr> <tr> <td></td> <td></td> <td>Digital investment aimed at decarbonization</td> </tr> <tr> <td></td> <td></td> <td>Battery industry</td> </tr> <tr> <td>2</td> <td>Renewable energy</td> <td>Making renewable energy a major power source</td> </tr> <tr> <td rowspan="2">3</td> <td rowspan="2">Low-carbon and decarbonized energy</td> <td>Establishing electricity and gas markets to achieve carbon neutrality</td> </tr> <tr> <td>Utilization of nuclear power</td> </tr> <tr> <td rowspan="3">4</td> <td rowspan="3">Clean transportation</td> <td>GX in transport sector</td> </tr> <tr> <td>Resource circulation</td> </tr> <tr> <td>Infrastructure</td> </tr> </tbody> </table>	No.	Eligibility Criteria		Categories	Sub-categories	1	Energy efficiency	Promotion of thorough energy efficiency improvement	Houses and buildings	Restructuring the manufacturing industry (fuel and feedstocks transition)			Digital investment aimed at decarbonization			Battery industry	2	Renewable energy	Making renewable energy a major power source	3	Low-carbon and decarbonized energy	Establishing electricity and gas markets to achieve carbon neutrality	Utilization of nuclear power	4	Clean transportation	GX in transport sector	Resource circulation	Infrastructure
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		Resource circulation												
○	<b>1-c)</b>	The implementation of a transition strategy assumes cases where it affects society and environment other than climate change, such as employment or stable provision of products and services, through transformation of a business model. In such cases, it is recommended that the fundraiser also takes into consideration the impact of business innovations to society and environment other than climate change.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	With regard to the implementation of the Issuer's Transition Strategy, DNV has confirmed through its assessment of the Issuer that the significant social and environmental impacts are expected to contribute to industrial competitiveness and economic growth, in addition to the contribution to climate change.									
◎ (△)	<b>1-d)</b>	Climate change-related scenarios <sup>11</sup> should be referenced in developing transition strategies. The pathway to transition should be planned for respective sector and regions of individual fundraiser, who may	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	The Issuer's Transition Strategy is established on the Plan for Global Warming Countermeasures, Japan's NDC (Nationally Determined Contribution), the Strategic Energy Plan and the long-term strategy as a growth strategy based on the									


Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings																		
		generally be placed in a different starting point and pathway to transition.			<p>Paris Agreement, which were formulated with reference to international scenarios.</p> <p>The Issuer has formulated roadmaps for promoting transition finance in key emission sectors (11 sectors in total, including power, industry and transport) in line with various governmental measures and scenarios (see e.g., IEA, IPCC, SBTi), including GHG (CO<sub>2</sub>) emission reduction images.</p> <table border="1"> <thead> <tr> <th>(1) METI</th> <th>(2) Other sectors</th> </tr> </thead> <tbody> <tr> <td>Steel sector</td> <td>International shipping sector (MLIT)</td> </tr> <tr> <td>Chemical sector</td> <td>Inland shipping sector (MLIT)</td> </tr> <tr> <td>Power sector</td> <td>Aviation sector (MLIT)</td> </tr> <tr> <td>Gas sector</td> <td></td> </tr> <tr> <td>Oil sector</td> <td></td> </tr> <tr> <td>Pulp and paper sector</td> <td></td> </tr> <tr> <td>Cement sector</td> <td></td> </tr> <tr> <td>Automotive sector</td> <td></td> </tr> </tbody> </table>	(1) METI	(2) Other sectors	Steel sector	International shipping sector (MLIT)	Chemical sector	Inland shipping sector (MLIT)	Power sector	Aviation sector (MLIT)	Gas sector		Oil sector		Pulp and paper sector		Cement sector		Automotive sector	
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○	<b>1-e)</b>	Transition strategies and plans must be highly credible in terms of their effectiveness. Therefore, it is recommended that a transition strategy and plan are linked to management strategy and business plan, including medium-term management plans.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	The issuer has formulated a roadmap, in which it has specifically developed a strategy and plan for the decade. The roadmap is closely linked to the Issuer's challenges and initiatives to address climate change and is judged to be highly credible in terms of effectiveness.																		
△	<b>1-f)</b>	However, because such strategies and plans run for a long period of	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Same as 1-a)	DNV has confirmed that the Issuer has established a structure and mechanism to promote the Transition																		

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		time, it is possible that the content may be modified or adjusted in the event of a major change in the assumed external environment and so on.	<input type="checkbox"/> Not Applicable		Strategy as a country. DNV has also confirmed that the above plans and strategies, which form the basis for the implementation of the Transition Strategy, will be updated annually or through periodic follow-ups and revisions.
△	<b>1-g)</b>	In the initial phase of developing a transition strategy by the fundraiser, it is considered as an option for the fundraiser to indicate a plan for future implementation of items described with the words “recommended” and “be considered/possible” in these Guidelines.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	DNV has confirmed that the Issuer’s Transition Strategy has also generally been implemented, or is planned to be implemented in the future, for the “recommended” and “be considered/possible” items in these Basic Guidelines.
◎	<b>1-h)</b>	In order to secure the effectiveness of the transition strategy, the fundraiser should establish an organizational structure <sup>12</sup> for the board of directors and/or other such committee to oversee the activities addressing climate change	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	DNV has confirmed that the Issuer will establish and implement the following organizational structures: <ul style="list-style-type: none"> <li>For GX implementation, the GX Implementation Council, chaired by the Prime Minister, has been held since July 2022 to have discussions with relevant ministers and experts to determine the policy direction.</li> </ul>

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		and for management to play a role in assessing and managing such climate-related activities.		 <p>The flowchart illustrates the process for refining 'Sector-specific Investment Strategies' proposals. It starts with 'Relevant Ministries and Agencies' (FSA, MOFA, MOF, MHLW, MAFF, METI, MLIT, MOE) presenting proposals. These go to the 'Cabinet Secretariat GX Office' for refinement, which also incorporates 'Specialist Insights'. The refined proposals are then reported to the 'GX Implementation Council'.</p>	
△	<b>1-i)</b>	While a transition strategy shall be basically developed by a company in need of finance, it is possible for entities to utilize the strategy of companies that are wholly or partially responsible for the initiatives to establish or explain their own strategy, given that the finance supports GHG emissions reduction initiatives of not just a single company but its supply chain.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	<p>DNV has confirmed that the Issuer has defined the targets and activities necessary to realize the GX for each industry.</p> <p>Specifically, the Issuer has formulated roadmaps for promoting transition finance in key emission sectors (11 sectors in total, including power, industry and transport) in line with various governmental measures and scenarios (see e.g., IEA, IPCC, SBTi), including GHG (CO<sub>2</sub>) emission reduction images.</p> <p>In addition, specific measures and emission reductions are set out in the Plan for Global Warming Countermeasures until 2030.</p>
◎	<b>1-j)</b>	Transition strategies should be disclosed in advance in a company's integrated report, sustainability report, statutory documents and other materials for investors (including such disclosures on the website). This also applies to the other three elements.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	<p>DNV has confirmed that the Issuer's Transition Strategy has been publicly disclosed and explained to stakeholders, including investors, in advance through the roadmap and the Framework.</p>

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings									
△	1-k)	It is possible to disclose transition strategies and elements concerning the governance guaranteeing that the execution of transition strategies is in alignment with the reporting frameworks such as the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD; Final Report) <sup>13</sup> .	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	<p>The main process of the Issuer’s Transition Strategy follows the NDC framework (rules for NDC description etc.) with seven items outlined and disclosed in the annex to “Japan’s NDC (Nationally Determined Contribution).”</p> <ol style="list-style-type: none"> <li>1. Quantifiable information on the reference point (including, as appropriate, a base year):</li> <li>2. Time frames and/or periods for implementation:</li> <li>3. Scope and coverage:</li> <li>4. Planning processes:</li> <li>5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:</li> <li>6. How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:</li> </ol> <p>How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2: Other detailed implementation plans and governance have been disclosed in the Framework.</p>									
○	1-l)	If the implementation of a transition strategy assumes impacts on society and environment other than climate change, it is recommended that the fundraiser explain the view underlying its approach <sup>14</sup> , etc. to address such impacts and disclose how the strategy on the whole contributes to achieving the	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	<p>The Climate Transition Bond executed in accordance with the Issuer’s Transition Strategy contributes directly or indirectly to the SDGs and contributes to Just Transition. The direct or indirect contributions to the SDGs are categorized by eligibility criteria and each area of contribution to the SDGs are organized.</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Eligibility criteria</th> <th>Typical SDG classification (SDG Goals)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Energy efficiency</td> <td>7, 8, 9, 11, 13</td> </tr> <tr> <td>2</td> <td>Renewable energy</td> <td>7, 8, 13</td> </tr> </tbody> </table>	No.	Eligibility criteria	Typical SDG classification (SDG Goals)	1	Energy efficiency	7, 8, 9, 11, 13	2	Renewable energy	7, 8, 13
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		Sustainable Development Goals (SDGs) so that the effects can be appropriately evaluated by the financier.			<table border="1" data-bbox="1444 400 2067 754"> <tr> <td>3</td> <td>Low-carbon and decarbonized energy</td> <td>7, 8, 9, 13</td> </tr> <tr> <td>4</td> <td>Clean transportation</td> <td>7, 8, 9, 11, 13</td> </tr> <tr> <td>5</td> <td>Prevention and control of pollution</td> <td>7, 8, 9, 13</td> </tr> <tr> <td>6</td> <td>Circular economy adapted products etc.</td> <td>7, 8, 9, 13</td> </tr> <tr> <td>7</td> <td>Sustainable management of living natural resources etc.</td> <td>8, 9, 11, 12, 13, 14, 15</td> </tr> </table> <p data-bbox="1444 778 1570 805">SDG Goals</p> <ul style="list-style-type: none"> <li data-bbox="1444 815 1892 890">  7. Affordable and clean energy         </li> <li data-bbox="1444 895 1973 970">  8. Decent work and economic growth         </li> <li data-bbox="1444 975 2011 1050">  9. Industry innovation and infrastructure         </li> <li data-bbox="1444 1054 1995 1129">  11. Sustainable cities and communities         </li> <li data-bbox="1444 1134 2063 1209">  12. Responsible consumption and production         </li> <li data-bbox="1444 1214 1742 1289">  13. Climate action         </li> <li data-bbox="1444 1294 1771 1369">  14. Life below water         </li> </ul>	3	Low-carbon and decarbonized energy	7, 8, 9, 13	4	Clean transportation	7, 8, 9, 11, 13	5	Prevention and control of pollution	7, 8, 9, 13	6	Circular economy adapted products etc.	7, 8, 9, 13	7	Sustainable management of living natural resources etc.	8, 9, 11, 12, 13, 14, 15
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					 15. Life on land
◎	<b>1-m)</b>	Considering the length of application and other factors, there may be instances when a transition strategy and plan will need to be modified due to major changes in the external environment and relevant conditions that were assumed at a planning phase. In this case, the contents of the modification should be disclosed together with the underlying reason in a timely manner.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	<p>DNV has confirmed that the Issuer intends to update the Transition Strategy and plans as necessary, either annually or through periodic follow-ups and revisions.</p> <p>In the event of major changes to the Plan for Global Warming Countermeasures and the Strategic Energy Plan, which form the basis for the strategy implementation, the Transition Strategy and the initiatives for its realization are planned to be reviewed. The content and reasons for the changes are expected to be disclosed in the reviewed plan.</p>
○	<b>1-n)</b>	In terms of governance, it is recommended that disclosures include an organizational structure for overseeing the implementation of a transition strategy and for assessing and managing related initiatives. It is also recommended that disclosures include the specific roles of the constituent organizations and the management and the process by which the content of deliberations is reflected in management.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	Same as 1-h) and 1-m)

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings												
○	<b>1-o)</b>	In cases where the fundraiser determines the need for an objective assessment regarding the transition strategy, it is recommended that a review, assurance and verification by an external organization for its transition strategy.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	The Issuer uses the reviews of DNV and Japan Credit Rating Agency, Ltd. as external bodies to ensure an objective assessment on the eligibility of the Framework, including the Transition Strategy.												
△	<b>1-p)</b>	It is recognized useful to obtain a review particularly concerning the following in connection with the transition strategy: <ul style="list-style-type: none"> <li>- Alignment of short-term, mid-term and long-term targets (for targets, refer to Element 3) with the overall scenario</li> <li>- Credibility of the fundraiser's strategy to reach the targets</li> <li>- Appropriateness of the management process and governance for the transition strategy</li> </ul>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-a)	DNV has confirmed the following with regard to its review of the Issuer's Transition Strategy: <ul style="list-style-type: none"> <li>- The Issuer's Transition Strategy is aligned with mid- and long-term goals, and established GHG (CO<sub>2</sub>) emission reduction images etc. in major GHG-intensive industries in line with governmental measures and scenarios (see e.g., IEA, IPCC, SBTi). These are consistent with the targets shown in the table below as a whole.</li> </ul> <table border="1" data-bbox="1444 1010 2123 1337"> <thead> <tr> <th>Fiscal year</th> <th>Targets</th> <th>CO<sub>2</sub> emissions</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>Base year</td> <td>1.408 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2030</td> <td>CO<sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)</td> <td>0.76 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2050</td> <td>Carbon neutrality</td> <td>0 billion t-CO<sub>2</sub></td> </tr> </tbody> </table>	Fiscal year	Targets	CO <sub>2</sub> emissions	2013	Base year	1.408 billion t-CO <sub>2</sub>	2030	CO <sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)	0.76 billion t-CO <sub>2</sub>	2050	Carbon neutrality	0 billion t-CO <sub>2</sub>
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Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
					<ul style="list-style-type: none"> <li>- DNV has confirmed that the implementation plan is credible, ambitious and achievable based on the assessment of the Transition Strategy in accordance with the Framework established by the national plans etc. and the “Basic Policy for the Realization of GX.”</li> <li>- The Transition Strategy is planned to appropriately implemented through the organizational structure described in 1-h) and the management processes described in 1-f), 1-m) and 1-n).</li> </ul>

- 9 Transition finance is available for not only entities with strategies and plans for reducing emissions associated with their corporate economic activities, but also entities that plan to take initiatives that enable others to implement transition strategies through their own products and services. In such cases of financial institutions, a financier should articulate how the underlying projects or activities themselves fit into the fundraiser’s strategy while, similarly, a subsidiary or an SPC to make use of its group’s or its sponsors’ strategy. However, doing so they should explain how their strategy will contribute to the strategy as a whole. In addition, it can be considered that parent company or the group who established the strategy would explain the transition elements as the main fundraiser.
- 10 The Paris Agreement sets out a goal to Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.
- 11 Climate-related scenarios are listed in the “Task Force on Climate-related Financial Disclosures (TCFD) Technical Supplement” and the document issued by the Ministry of the Environment: “Practical Guide for Scenario Analysis in line with TCFD Recommendations”. In addition, Principles for Responsible Investment (PRI) disclose a set of climate scenario tools.
- 12 Assumes matters provided for under “governance” in the TCFD Recommendations.
- 13 As for the approach to disclosure aligned with TCFD Recommendations, refer to “Guidance on Climate-related Financial Disclosures (TCFD Guidance) 2.0”, “Guidance for Utilizing Climate-related Information to Promote Green Investment (Green Investment Guidance)” (both published by the TCFD Consortium), and the document published by the Ministry of the Environment: “Practical Guide for Scenario Analysis in line with TCFD Recommendations”.
- 14 An example of the approach may be to identify, eliminate, reduce, and manage potential negative effects.

## CTFBG-2 Business Model Environmental Materiality

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings																																
©	2-a)	Initiatives for achieving the transition strategy should be such that contribute to transforming core business activities that are environmentally material parts today and in the future. <sup>15</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Strategic Energy Plan</li> <li>- Long-term strategy as a growth strategy based on the Paris Agreement</li> <li>- Japan's NDC</li> <li>- Sector-specific technology roadmap</li> <li>- GX Implementation Council documents</li> <li>- Assessment documents</li> </ul> <p>Interview with the Issuer</p>	<p>The Issuer has positioned realization of the Transition Strategy through GX as an important industrial and energy policy that shifts the industrial and social structure to a clean energy focus in order to ensure a stable energy supply for business activities and people's lives, promote decarbonization and achieve economic growth.</p> <p>As GX core business activities, the roadmap has identified the following eligibility criteria as specific initiatives.</p> <table border="1"> <thead> <tr> <th rowspan="2">No.</th> <th colspan="2">Eligibility Criteria</th> </tr> <tr> <th>Categories</th> <th>Sub-categories</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1</td> <td rowspan="3">Energy efficiency</td> <td>Promotion of thorough energy efficiency improvement</td> </tr> <tr> <td>Houses and buildings</td> </tr> <tr> <td>Restructuring the manufacturing industry (fuel and feedstocks transition)</td> </tr> <tr> <td></td> <td></td> <td>Digital investment aimed at decarbonization</td> </tr> <tr> <td></td> <td></td> <td>Battery industry</td> </tr> <tr> <td>2</td> <td>Renewable energy</td> <td>Making renewable energy a major power source</td> </tr> <tr> <td rowspan="2">3</td> <td rowspan="2">Low-carbon and decarbonized energy</td> <td>Establishing electricity and gas markets to achieve carbon neutrality</td> </tr> <tr> <td>Utilization of nuclear power</td> </tr> <tr> <td rowspan="3">4</td> <td rowspan="3">Clean transportation</td> <td>GX in transport sector</td> </tr> <tr> <td>Resource circulation</td> </tr> <tr> <td>Infrastructure</td> </tr> <tr> <td rowspan="2">5</td> <td rowspan="2">Circular economy adapted products, production technologies and processes</td> <td>Restructuring the manufacturing industry (fuel and feedstocks transition)</td> </tr> <tr> <td>Facilitating the introduction of hydrogen and ammonia</td> </tr> </tbody> </table>	No.	Eligibility Criteria		Categories	Sub-categories	1	Energy efficiency	Promotion of thorough energy efficiency improvement	Houses and buildings	Restructuring the manufacturing industry (fuel and feedstocks transition)			Digital investment aimed at decarbonization			Battery industry	2	Renewable energy	Making renewable energy a major power source	3	Low-carbon and decarbonized energy	Establishing electricity and gas markets to achieve carbon neutrality	Utilization of nuclear power	4	Clean transportation	GX in transport sector	Resource circulation	Infrastructure	5	Circular economy adapted products, production technologies and processes	Restructuring the manufacturing industry (fuel and feedstocks transition)	Facilitating the introduction of hydrogen and ammonia
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○	<b>2-b)</b>	When identifying business activities that are environmentally material parts, it is recommended that the fundraiser consider multiple climate change-related scenarios that may possibly impact its judgment on the identification <sup>16</sup> .	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 2-a)	<p>The Issuer's Transition Strategy is established on the Plan for Global Warming Countermeasures, Japan's NDC (Nationally Determined Contribution), the Strategic Energy Plan and the long-term strategy as a growth strategy based on the Paris Agreement, which were formulated with reference to international scenarios.</p> <p>The Issuer has formulated roadmaps for promoting transition finance in key emission sectors (11 sectors in total, including power, industry and transport) in line with various governmental measures and scenarios (see e.g., IEA, IPCC, SBTi), including GHG (CO<sub>2</sub>) emission reduction images.</p> <table border="1"> <tr> <td>(1) METI</td> <td>(2) Other sectors</td> </tr> <tr> <td>Steel sector</td> <td>International shipping sector (MLIT)</td> </tr> <tr> <td>Chemical sector</td> <td>Inland shipping sector (MLIT)</td> </tr> <tr> <td>Power sector</td> <td>Aviation sector (MLIT)</td> </tr> <tr> <td>Gas sector</td> <td></td> </tr> <tr> <td>Oil sector</td> <td></td> </tr> <tr> <td>Pulp and paper sector</td> <td></td> </tr> <tr> <td>Cement sector</td> <td></td> </tr> <tr> <td>Automotive sector</td> <td></td> </tr> </table>	(1) METI	(2) Other sectors	Steel sector	International shipping sector (MLIT)	Chemical sector	Inland shipping sector (MLIT)	Power sector	Aviation sector (MLIT)	Gas sector		Oil sector		Pulp and paper sector		Cement sector		Automotive sector	
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△	<b>2-c)</b>	In terms of considering materiality, it is possible to apply	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Same as 2-a)	Although no existing guidance has been applied with regard to the consideration of the environmental materialities of the Issuer, the challenges and initiatives as well as initiatives																		

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		existing guidance provided by an organization that creates standard criteria concerning sustainability reporting <sup>17</sup> .	<input type="checkbox"/> Not Applicable		<p>through GX presented by the Issuer itself to address climate change have been positioned as an important industrial and energy policy to shift the industrial and social structure to a clean energy focus.</p> <p>These initiatives are consistent with Japan’s initiatives to address climate change and other environmental issues in the international society, as well as initiatives consistent with the Paris Agreement.</p>
◎	<b>2-d)</b>	The fundraiser should indicate that climate change is an environmentally material part of business activities <sup>18</sup> .	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 2-a)	<p>The Issuer has explained through the roadmap and the Framework that the initiatives to address climate change are important to the country in the environmental aspect.</p> <p>The Issuer is also supporting the participation of Japanese companies in the TCFD on climate change initiatives and recommends to disclose that climate change will be important in the environmental aspect for corporate activities in the entire society.</p>
○	<b>2-e)</b>	It is recommended that disclosures include the contents of climate change-related scenarios used in identifying business activities that are environmentally material parts along with the underlying reasons (e.g., regional and industrial	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 2-a)	<p>The Issuer has formulated roadmaps for promoting transition finance in key emission sectors (11 sectors in total, including power, industry and transport) in line with various governmental measures and scenarios (see e.g., IEA, IPCC, SBTi), including GHG (CO<sub>2</sub>) emission reduction images (see 1-d), and 2-b)).</p>



Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		characteristics) for selecting such scenarios.			

15 They include activities that are environmentally material parts are considered to be business activities of the issuer that identifies climate change as part of its materiality.

16 Scenario analysis using multiple climate-related scenarios is similar to that required by the TCFD Recommendations, and it is considered useful to refer to relevant guidelines and such like for implementation methods. An example is the document issued by the Ministry of the Environment: “Practical Guide for Scenario Analysis in line with TCFD Recommendations”.

17 “The SASB Materiality Map” issued by the Sustainability Accounting Standards Board serves as a guidance concerning materiality.

18 As for the approach to identifying environmentally material business activities, it is possible to use the materiality map and such like and outline the level of materiality of climate change for one’s entity.

## CTFBG-3 Climate Transition Strategy to be Science-based including Targets and Pathways

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
©	<b>3-a)</b>	The fundraiser should reference science-based targets in developing its transition strategies.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Strategic Energy Plan</li> <li>- Long-term strategy as a growth strategy based on the Paris Agreement</li> <li>- Japan's NDC</li> <li>- Sector-specific technology roadmap</li> </ul> <p>Interview with the Issuer</p>	<p>The Transition Strategy is based on the long-term goal of carbon neutrality in 2050, when the total emissions and absorptions of greenhouse gases will be zero, and the mid-term goal of a 46% reduction in 2030 (compared to FY2013).</p> <p>The long-term goal is consistent with the goals of the Paris Agreement, and the 46% reduction in 2030 (compared to FY2013) is the intersection with 2030 on a trajectory linearly interpolated from FY2013 (base year) emissions to carbon neutrality in 2050, both of which are considered to have a scientific basis.</p> <p>The Transition Strategy is embodied in the roadmap, the Plan for Global Warming Countermeasures, etc. together with implementation timelines based on the above science-based goals.</p>
©	<b>3-b)</b>	This should include mid-term targets (short- to mid-term targets) in addition to long-term targets for 2050 and be quantitatively measurable based on a measurement methodology which is consistent over a long period of time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	<p>The Issuer has a long-term goal of carbon neutrality in 2050, when the total emissions and absorptions of greenhouse gases will be zero, which is intended to align with the goals of the Paris Agreement, and a mid-term goal of a 46% reduction by 2030 (compared to 2013).</p> <p>These have been measured and monitored for a long period of time in the Plan for Global Warming Countermeasures etc.,</p>

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					<p>and are judged to be quantifiable using consistent measurement methods.</p> <table border="1"> <thead> <tr> <th>Fiscal year</th> <th>Targets</th> <th>CO<sub>2</sub> emissions</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>Base year</td> <td>1.408 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2030</td> <td>CO<sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)</td> <td>0.76 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2050</td> <td>Carbon neutrality</td> <td>0 billion t-CO<sub>2</sub></td> </tr> </tbody> </table>	Fiscal year	Targets	CO <sub>2</sub> emissions	2013	Base year	1.408 billion t-CO <sub>2</sub>	2030	CO <sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)	0.76 billion t-CO <sub>2</sub>	2050	Carbon neutrality	0 billion t-CO <sub>2</sub>
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◎ (△)	<b>3-c)</b>	In addition, it is recommended that GHG reduction targets, which could be formulated either in intensity and absolute terms, should consider environmental materiality and cover Scopes 1 through 3 of GHG Protocol, the international standard on supply-chain emissions. It is recommended that targets covering Scope 3 be set using a practical calculation method when it could be subject to significant reduction in the fundraiser's business model <sup>19</sup> . It is also possible to disclose the avoided emissions as necessary.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	<p>The Issuer has defined emission reductions as absolute values (GHG emissions and absorptions).</p> <p>GHG emissions cannot be directly organized as Scope 3 in the assessment of GHG emissions of the Issuer or Japan. When GHG emissions corresponding to Scope 3 are taken and assessed as emissions of the entire Japanese society, the coverage ratio is confirmed to be 100%, including scope and target gases, in accordance with IPCC guidelines.</p>												
◎ (△)	<b>3-d)</b>	Science-based targets are GHG reduction targets required for achieving the goals of the Paris	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Same as 3-a)	The Issuer's transition targets refer to the following:												

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		<p>Agreement and should be set while taking into account differences in regional characteristics and industries. In so doing, it is possible to refer to the following trajectories.</p> <ul style="list-style-type: none"> <li>- Scenarios widely recognized in the international community (Examples include the Sustainable Development Scenario (SDS) outlined by the International Energy Agency (IEA) <sup>20</sup></li> <li>- Objectives verified under the Science Based Targets Initiative (SBTi) and such like               <ul style="list-style-type: none"> <li>- Nationally Determined Contributions (NDC) of countries aligned with the goals of the Paris Agreement, roadmaps by industry sector<sup>21</sup>, industries set out plans that are science-based achieving the Paris Agreement<sup>22</sup> and so on.</li> </ul> </li> </ul>	<input type="checkbox"/> Not Applicable		<ul style="list-style-type: none"> <li>• Japan's NDC consistent with the goals of the Paris Agreement</li> </ul> <p>The Issuer has formulated roadmaps for promoting transition finance in key emission sectors (11 sectors in total, including power, industry and transport) in line with various governmental measures and scenarios (see e.g., IEA, IPCC, SBTi), including GHG (CO<sub>2</sub>) emission reduction images.</p>
◎	<b>3-e)</b>	Short- to mid-term targets (with a term of three to fifteen years) should be set by referencing the aforesaid trajectories or on the pathway toward the long-term targets planned as benchmarks <sup>23</sup> .	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	The mid-term goal of a 46% reduction in 2030 (compared to FY2013) is the intersection with 2030 on a trajectory linearly interpolated from FY2013 (base year) emissions to carbon neutrality in 2050, and is judged to be on the path towards the long-term goal.
△	<b>3-f)</b>	In doing so, since short- to mid-term targets will likely be set in consideration of various factors (including the starting point and track	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	The Issuer set 2013 as the base year (starting point) as an update as of 2015, when the goal for 2030 was first prepared prior to the Paris Agreement. The mid-term goal of a 46% reduction in 2030 (compared to FY2013) is



Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings												
		records of the issuer, timing of capital investments, economic rationality, cost-benefit analysis, and availability of technology necessary to achieve the targets), it is possible that the pathway may not necessarily be linear with the same slope at all times but may be nonlinear.			on a linear interpolation between FY2013 and 2050 as shown in 3-a) and 3-e). However, the process along the way may be non-linear due to various factors (e.g., status of technology development, implementation status, economic rationale).												
©	<b>3-g)</b>	The fundraiser should disclose the short- to mid-term and long-term targets they have set, including the base years etc.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	<p>The Issuer's mid-term and long-term goals use 2013 CO<sub>2</sub> emissions as the base year. The CO<sub>2</sub> emissions are calculated as the total of GHG emissions and absorptions.</p> <p>The CO<sub>2</sub> emissions (GHG emissions) for the base year, mid-term and long-term goals are as follows:</p> <table border="1"> <thead> <tr> <th>Fiscal year</th> <th>Targets</th> <th>CO<sub>2</sub> emissions</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>Base year</td> <td>1.408 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2030</td> <td>CO<sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)</td> <td>0.76 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2050</td> <td>Carbon neutrality</td> <td>0 billion t-CO<sub>2</sub></td> </tr> </tbody> </table>	Fiscal year	Targets	CO <sub>2</sub> emissions	2013	Base year	1.408 billion t-CO <sub>2</sub>	2030	CO <sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)	0.76 billion t-CO <sub>2</sub>	2050	Carbon neutrality	0 billion t-CO <sub>2</sub>
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©	<b>3-h)</b>	In order to show that long-term targets are science-based, disclosures should explain the methodology or trajectory used to define target, including the underlying reasons (e.g., characteristics specific to a region or industry). In particular, when	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	<p>The Issuer's transition targets are set in accordance with the Japan's NDC, which is consistent with the goals of the Paris Agreement.</p> <p>The Issuer has formulated roadmaps for promoting transition finance in key emission sectors (11 sectors in total, including power, industry and transport) in line with various governmental measures and scenarios (see e.g.,</p>												

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		reference is made to plans and industry roadmaps established by an industry, etc., the explanation should include that they are grounded in scientific basis.			IEA, IPCC, SBTi), including GHG (CO <sub>2</sub> ) emission reduction images.
△	<b>3-i)</b>	It is possible that disclosures explain the pathway toward a long-term target and the alignment between the short- to mid-term targets on the pathway and the transition strategy, based on the investment plan (refer to Element 4) and other plans.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	<p>The Issuer has disclosed the basic investment program for the implementation of the Transition Strategy. Specifically, the Issuer plans to provide approximately JPY 20 trillion in governmental support (The GX Economy Transition Bonds) as upfront investment support over a 10-year period starting in FY2023, as well as over JPY 150 trillion in public-private investment over the same period.</p> <p>The major investment destinations of the GX Economy Transition Bonds are the following:</p> <p>“Promotion of non-fossil energy (JPY 6-8 trillion)”  “Industrial restructuring and radical energy conservation in a combination of supply and demand (approximately JPY 9-12 trillion)”  “Resource recycling and carbon fixation technologies (approximately JPY 2-4 trillion)”</p> <p>The investment program has been disclosed in the Framework and the “Basic Policies for the Realization of GX” as the information necessary for dialogue with the market.</p>

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings															
					<p style="text-align: center;"><b>Breakdown of government support over the next decade</b> <b>20 trillion yen</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;"><b>Expansion of non-fossil energy</b></td> <td style="width: 10%; padding: 5px;"><b>6~8 trillion yen</b></td> <td style="padding: 5px;"> <p><b>Example</b></p> <ul style="list-style-type: none"> <li>• Support for demand expansion of hydrogen and ammonia</li> <li>• Research and development of new technologies related to renewable energy etc.</li> </ul> </td> </tr> <tr> <td style="padding: 5px;"><b>Transformation of industrial structure on both supply and demand sides &amp; Drastic reinforcement of energy saving</b></td> <td style="padding: 5px;"><b>9~12 trillion yen</b></td> <td style="padding: 5px;"> <p><b>Example</b></p> <ul style="list-style-type: none"> <li>• Energy conservation and fuel conversion for structural reform and improving profitability in the manufacturing industry</li> <li>• Nationwide measures addressing domestic energy demands</li> <li>• Achieve drastic energy savings etc.</li> </ul> </td> </tr> <tr> <td style="padding: 5px;"><b>Resource circulation and carbon capture technologies etc.</b></td> <td style="padding: 5px;"><b>2~4 trillion yen</b></td> <td style="padding: 5px;"> <p><b>Example</b></p> <ul style="list-style-type: none"> <li>• R&amp;D and implementation of new technologies etc.</li> </ul> </td> </tr> </table> <p style="text-align: center; margin-top: 10px;">▶ Attracting private investment in conjunction with regulations, etc</p> <p style="text-align: center;"><b>Overall public and private investment over the next decade</b> <b>150 trillion yen</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;"><b>60 trillion yen~</b></td> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>• Massive introduction of renewables</li> <li>• Nuclear energy (R&amp;D of innovative reactors, etc.)</li> <li>• Hydrogen and ammonia etc.</li> </ul> </td> </tr> <tr> <td style="padding: 5px;"><b>80 trillion yen~</b></td> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>• Energy saving and fuel conversion in the manufacturing industry (e.g., steel, chemicals, cement)</li> <li>• Digital investment for decarbonization</li> <li>• Establishment of battery industry</li> <li>• Structural transformation of ship and aircraft industries</li> <li>• Next-generation automobiles</li> <li>• Housing and Buildings etc.</li> </ul> </td> </tr> <tr> <td style="padding: 5px;"><b>10 trillion yen~</b></td> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>• Resource circulation industry</li> <li>• Bio manufacturing</li> <li>• CCS etc.</li> </ul> </td> </tr> </table> <p style="text-align: center; margin-top: 10px;">Image of governmental support and overall public-private investments for the 10 years since 2023</p>	<b>Expansion of non-fossil energy</b>	<b>6~8 trillion yen</b>	<p><b>Example</b></p> <ul style="list-style-type: none"> <li>• Support for demand expansion of hydrogen and ammonia</li> <li>• Research and development of new technologies related to renewable energy etc.</li> </ul>	<b>Transformation of industrial structure on both supply and demand sides &amp; Drastic reinforcement of energy saving</b>	<b>9~12 trillion yen</b>	<p><b>Example</b></p> <ul style="list-style-type: none"> <li>• Energy conservation and fuel conversion for structural reform and improving profitability in the manufacturing industry</li> <li>• Nationwide measures addressing domestic energy demands</li> <li>• Achieve drastic energy savings etc.</li> </ul>	<b>Resource circulation and carbon capture technologies etc.</b>	<b>2~4 trillion yen</b>	<p><b>Example</b></p> <ul style="list-style-type: none"> <li>• R&amp;D and implementation of new technologies etc.</li> </ul>	<b>60 trillion yen~</b>	<ul style="list-style-type: none"> <li>• Massive introduction of renewables</li> <li>• Nuclear energy (R&amp;D of innovative reactors, etc.)</li> <li>• Hydrogen and ammonia etc.</li> </ul>	<b>80 trillion yen~</b>	<ul style="list-style-type: none"> <li>• Energy saving and fuel conversion in the manufacturing industry (e.g., steel, chemicals, cement)</li> <li>• Digital investment for decarbonization</li> <li>• Establishment of battery industry</li> <li>• Structural transformation of ship and aircraft industries</li> <li>• Next-generation automobiles</li> <li>• Housing and Buildings etc.</li> </ul>	<b>10 trillion yen~</b>	<ul style="list-style-type: none"> <li>• Resource circulation industry</li> <li>• Bio manufacturing</li> <li>• CCS etc.</li> </ul>
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<b>80 trillion yen~</b>	<ul style="list-style-type: none"> <li>• Energy saving and fuel conversion in the manufacturing industry (e.g., steel, chemicals, cement)</li> <li>• Digital investment for decarbonization</li> <li>• Establishment of battery industry</li> <li>• Structural transformation of ship and aircraft industries</li> <li>• Next-generation automobiles</li> <li>• Housing and Buildings etc.</li> </ul>																			
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△	<b>3-j)</b>	<p>Concerning targets and trajectories, obtaining expert reviews on the following is considered to be particularly useful:</p> <ul style="list-style-type: none"> <li>- Whether the long-term target is aligned with science-based targets</li> <li>➤ Whether the disclosed information explains the alignment with the Paris Agreement</li> <li>- Whether the short- to mid-term targets are determined using a GHG</li> </ul>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 3-a)	<p>Based on the documentation and information provided by the Issuer, DNV reviewed the following and has confirmed that the targets and trajectories are based on scientific evidence:</p> <ul style="list-style-type: none"> <li>- Is the long-term goal based on scientific evidence?             <ul style="list-style-type: none"> <li>➤ The long-term goal of the Issuer is carbon neutrality in 2050, when the total emissions and absorptions of greenhouse gases will be zero. The long-term goal is consistent with the goals of the Paris Agreement and is considered to have a scientific basis.</li> </ul> </li> </ul>															

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		<p>emissions forecast calculated based on a climate change scenario analysis</p> <ul style="list-style-type: none"> <li>➤ Whether scenarios, etc. widely recognized in the international community are used or referenced</li> <li>- Whether the actual values of the indicators used for the targets are quantitatively measured using consistent measurement methods</li> <li>➤ Whether a specific GHG emissions reduction measure has been developed to achieve short- to mid-term targets aligned with long-term goals</li> </ul>			<ul style="list-style-type: none"> <li>- In setting short- and mid-term goals, has the greenhouse gas calculation been estimated based on an analysis of climate change scenario? <ul style="list-style-type: none"> <li>➤ The greenhouse gas calculation was estimated for short- and mid-term goals based on linear interpolation between the long-term goal under the Paris Agreement and the base year, and the 46% reduction in GHG emissions in 2030 (compared to FY2013) has been set.</li> </ul> </li> <li>- Are performance values relating to the indicators utilized in the goals quantitatively measured by consistent measurement methods? <ul style="list-style-type: none"> <li>➤ The Issuer has set sector-specific GHG emission reduction measures and goals in order to realize the mid-term goal of a 46% reduction by 2030 in its Plan for Global Warming Countermeasures etc.</li> </ul> </li> </ul>

19 Since an appropriate method for calculating Scope 3 emissions for specific industrial sectors is under development, it is possible to estimate Scope 3 emissions on a provisional “best effort” basis. When disclosing, it is recommended that boundaries, calculation methods and other relevant factors be also reported. “Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain” (METI, MOE; 2017 Japanese only. Related information in English) can be used for calculation references.

20 In addition to benchmarks indicated by the IEA, there are those referenced by the IPCC, such as RCP 2.6 (keep global warming to below 2°C), RCP 1.9 (keep global warming to below 1.5°C) and other related Transition Pathway Initiative (TPI) benchmarks. Meanwhile, scenario listings are available in the TCFD Technical Supplement and in the document published by the Ministry of the Environment: “Practical Guide for Scenario Analysis in line with TCFD Recommendations”.

21 An example of a sector-specific roadmap formulated by a public organization is the “Roadmap to Zero Emission from International Shipping” (Ministry of Land, Infrastructure, Transport and Tourism; 2020). The Ministry of International Trade and Industry also plans to formulate a roadmap for high emission industries.

22 In utilizing a plan formulated at a sector level, it is necessary to have a credible proposition that the alignment with the Paris Agreement can be explained with scientific grounds.

23 While it is possible to set short- to mid-term targets by determining the standard based on an assumed use of best available technologies (BAT), consideration should be made as to whether the use of such technologies might make it difficult to achieve long-term targets.

## CTFBG-4 Implementation Transparency

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
©	4-a)	In implementing transition strategies, the fundraiser should provide transparency of the basic investment plan to the extent practicable.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- GX Implementation Council documents</li> <li>- Assessment documents</li> </ul> <p>Interview with the Issuer</p>	<p>DNV has confirmed that the Issuer has disclosed the image of the amount of governmental support and the overall amount of public-private investments for the 10 years since 2023 as its investment plan (see 3-i)).</p> <p>The Issuer has disclosed the basic investment program for the implementation of the Transition Strategy. Specifically, the Issuer plans to provide approximately JPY 20 trillion in governmental support (The GX Economy Transition Bonds) as upfront investment support over a 10-year period starting in FY2023, as well as over JPY 150 trillion in public-private investment over the same period.</p> <p>The major investment destinations of the GX Economy Transition Bonds are the following:</p> <p>“Promotion of non-fossil energy (JPY 6-8 trillion)”</p> <p>“Industrial restructuring and radical energy conservation in a combination of supply and demand (approximately JPY 9-12 trillion)”</p> <p>“Resource recycling and carbon fixation technologies (approximately JPY 2-4 trillion)”</p> <p>The investment program has been disclosed in the Framework and the “Basic Policies for the Realization of GX” as the information necessary for dialogue with the market.</p>

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings								
○	4-b)	The investment plan includes not only capital expenditure (Capex) but also capital and operational expenditure (Opex). Therefore, costs related to research and development, M&A, and dismantling and removal of facilities are also subject to the investment plan. In other words, it is recommended that the investment plan incorporate, to the extent possible, expenditure and investment necessary for implementing the transition strategy.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	<p>The Issuer’s investment plan is to invest in projects that are truly difficult for the private sector alone to make investment decisions and that contribute to emission reductions and the realization of industrial competitiveness and economic growth, and will be prioritized based on the basic concept specified in the roadmap. Specifically, costs related to research and development, including costs for the Green Innovation Fund projects, will be accounted.</p> <p>In addition, as “Just Transition” from the perspective of promoting GX in the entire society, the policy package of investment in people of JPY 400 billion over three years is planned to be significantly expanded to JPY 1 trillion over five years, taking into account the comprehensive economic measures to overcome high prices and realize economic revival approved by the Cabinet in October 2022.</p> <table border="1"> <thead> <tr> <th rowspan="2">No.</th> <th colspan="2">Eligibility Criteria</th> </tr> <tr> <th>Categories</th> <th>Sub-categories</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Energy efficiency</td> <td>           Promotion of thorough energy efficiency improvement            Houses and buildings            Restructuring the manufacturing industry (fuel and feedstocks transition)            Digital investment aimed at         </td> </tr> </tbody> </table>	No.	Eligibility Criteria		Categories	Sub-categories	1	Energy efficiency	Promotion of thorough energy efficiency improvement Houses and buildings Restructuring the manufacturing industry (fuel and feedstocks transition) Digital investment aimed at
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△	4-c)	It is recommended that the investment plan outline the assumed climate-related outcomes and impacts <sup>24</sup> in a quantitative fashion where possible, along with the calculation methods and prerequisites <sup>25</sup> . If quantification is difficult, the use of external certification systems can be	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	<p>With regard to the climate-related outcomes and impacts expected in the investment plan, appropriate indicators will be stated in the post-issuance reporting of the transition bond, depending on the characteristics of the eligible projects, and quantitative environmental benefits will be reported for practically quantifiable projects.</p> <p>Items relating to environmental benefits to be stated in the reporting are planned to include the following (see GBP-4 in the main text for details):</p>																					

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		considered as a substitute for qualitative assessment.			<ul style="list-style-type: none"> <li>- Key environmental benefit items (direct and indirect effects and expected future effects), progress status of projects, etc. on a project-by-project or eligibility-criteria basis (taking into account confidential obligations and the extent practicable)</li> <li>- Any significant changes in circumstances in eligible projects (e.g., significant process changes, suspension/discontinuation, changes in specifications that have a significant impact on the environmental benefits) during the redemption period of the bond after allocations have commenced</li> </ul>
○	<b>4-d)</b>	(In particular, when outlining the assumed climate-related outcomes and impacts, it is recommended that the disclosure include not only GHG emission reduction and other initiatives to ease climate change but also report how consideration of a “just transition” <sup>26</sup> is incorporated into the transition strategy.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	<p>The Issuer plans to ensure that Just Transition, mitigation of negative impact and avoidance of lock-in are in place in the “Basic Policy for the Realization of GX” and in the selection process of investment destinations (eligible projects).</p> <p>Specifically, the policy on Just Transition has been set out in the “Basic Policy for the Realization of GX” as “Promotion of GX in the entire society (section 5).”</p> <hr/> <p><b>Basic concept</b>      <b>In promoting GX, it is important to appropriately promote labor transfer to newly created industries from the perspective of Just Transition.</b>  Supporting the smooth labor transfer from fossil fuel-related industries to low-carbon industries will ensure people’s lives and employment and contribute to Japan’s economic growth. Therefore,</p>
○	<b>4-e)</b>	If implementing the transition strategy has the potential of having a negative impact on employment or the environment and communities other than climate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	



Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		change, it is recommended that any expenditures to mitigate such negative impacts be added to the plan.			<p>necessary support, including human resource development at universities etc. will be provided, while taking into account the actual conditions of each industry.</p> <p><b>Future actions</b>  The policy package of investment in people of JPY 400 billion over three years is significantly expanded to JPY 1 trillion over five years, taking into account the comprehensive economic measures to overcome high prices and realize economic revival approved by the Cabinet in October 2022.  Promote Just Transition by simultaneously facilitating the acquisition of new skills and smooth labor transfer to growth sectors, including green sectors, through support for the facilitation of labor transfer to growth sectors etc. and support for job transfers for career advancement of incumbent workers.</p>
◎	4-f)	Moreover, the outcomes arising from investments included in the investment plan should align with the targets.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	DNV has confirmed that the outcomes (4-c) from the candidate eligible projects included in the Issuer's investment plan are closely related to the goals (3-b) and that there are plans to help achieve the goals.
○ (△)	4-g)	Transition finance is a means to financially support the implementation of a transition strategy, and it is recommended that financing be provided for new initiatives. However, in the case of transition finance in the format of Use of Proceeds instruments,	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	<p>The Issuer's transition bond is basically planned to be allocated to finance new initiatives. However, it may also be allocated as refinancing.</p> <p>The Framework stipulates that if the proceeds of the transition bond are allocated as refinancing, the Issuer will target projects that have been put into operation (commenced operation) or to which proceeds have</p>

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
		refinancing for a reasonably set lookback period (the period during which refinancing is to be applied for projects that have already started) is considered to be eligible.			been allocated in the fiscal year that includes the date of fundraising and in the previous year. If a period other than the above is targeted, it will be disclosed in the statutory documents at the time of the issuance of the transition bond, together with the reasons.
○	<b>4-h)</b>	It is recommended that investment plans be disclosed by linking the outcomes and impacts with the expenditures to the extent practicable <sup>27</sup> .	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	<p>Through the assessment, DNV has confirmed that the investment plans for eligibility criteria etc. including the GX Economy Transition Bonds set out in the roadmap, eligible projects, and the industry-specific measures and goals set out in the Plan for Global Warming Countermeasures are closely linked.</p> <p>Although the individual documents do not directly link the amounts, outcomes and impacts of each investment target, the investment plan is judged, from a comprehensive perspective, to link the amounts, outcomes and impacts of each investment target.</p>
○	<b>4-i)</b>	It is recommended that the fundraiser, after securing financing, reports any deviations between the initial plan and the actual expenditure, outcomes and impacts. For any deviations, it is recommended that the underlying reasons be explained.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	DNV has confirmed that if there are material differences in the originally planned outcomes or impacts of the projects for which the Climate Transition Bond has been disbursed, the Issuer will explain the circumstances and reasons for such differences through annual reporting etc.

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
◎	<b>4-j)</b>	In cases where the Use of Proceeds bonds include refinancing, the fundraiser should provide an explanation on the lookback period set under the framework or other relevant methods along with the underlying reasons and factors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 4-a)	The Framework stipulates that if the proceeds of the transition bond are allocated as refinancing, the Issuer will target projects that have been put into operation (commenced operation) or to which proceeds have been allocated in the fiscal year that includes the date of fundraising and in the previous year. If a period other than the above is targeted, it will be disclosed in the statutory documents at the time of the issuance of the transition bond, together with the reasons.
○ (△)	<b>4-k)</b>	While there are differences in business practices, such as the fact that loans are traditionally made based on the bilateral relationship between a borrower and a lender, it is recommended that disclosure on the above be made to the extent possible in order to ensure transparency and credibility of transition finance. However, if it is difficult to disclose such information to the public from the standpoint of confidentiality and competition, it is possible to report such information only to lenders or external evaluation organizations without disclosing it to the public.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable	Same as 4-a)	There are no plans to utilize loans.

Ref.	No.	Disclosure Elements	Requirement Check	Work Undertaken	DNV Findings
△	4-I)	Similarly, in cases where the fundraiser is a small-to-medium-sized enterprise and it is difficult to disclose to the public the same content as that reported to the financier or an external evaluation institution, it is possible for the fundraiser to simplify the content of disclosure, for example, by limiting disclosure to a summary of h) to j) of this section.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable	Same as 4-a)	The Issuer is not an SME. The reporting content will be taken care to ensure that the type and size, the implementer and the progress status of eligible projects do not create an undue burden on the practical management of the eligible project.

- 24 The Ministry of the Environment, in its “Concept Paper on Impact Finance”, refers to impact as “a positive or negative change to the environment, society or economy caused by an organization and is not a direct deliverable or output but an outcome as a change brought about in terms of the environment, society or economy.”
- 25 In disclosing impacts, outlining the amount of contribution to reducing CO<sub>2</sub> emissions in the global value chain on the whole and the entire lifecycle, including the consumption phase, can be considered. For the amount of contribution to the reduction, it is possible to reference the “Guideline for Quantifying GHG Emission Reduction Contribution” (METI, 2018). Furthermore, as for outcomes on research and development, it is possible to reference the IEA Measuring Innovation by Technology Readiness Level (TRL) or Importance for Net-Zero Emission, among others, and outline the progress in the R&D phase or the potential of reducing CO<sub>2</sub> emissions with the relevant technology by highlighting the importance of net-zero emissions.
- 26 A just transition is an attempt to ensure the wide sharing of virtual profits created through a transition to a green economy, as well as to support any party who will experience an adverse economic impact (be it a country, a region, an industry, a community, a worker, or a consumer). The concept of a just transition corresponds to several SDGs.
- 27 In particular, disclosure of the investment plan is expected to be required for projects applicable to Use of Proceeds.



## Schedule-5 Green Bond Guidelines (Transition Bonds with Specific Use of Proceeds) Eligibility Assessment Protocol

The following checklists (GBGLs-1 through GBGLs-4) are prepared based on the Green Bond Guidelines (GBGLs), Ministry of Environment (MOE), 2022. According to the GBGLs, “Requirements”/“Evaluation Items” are classified into the following two categories: “Should: ☉”; and “Recommended: ○.” The documents listed in the “Work Undertaken” column are those confirmed as evidence, whose details are shown in the List of Reference Materials (Appendix-1). The evidence used in the evaluation work includes confirmed documents as well as information obtained through discussions and interviews with the fundraiser. **In Schedule-5, the requirements are applied to transition bonds with use of proceeds based on CTFH/CTFBG. Therefore, the terms “green (bond, project)” in the “Requirements/Evaluation Items” column in Schedule-5 should be read as “transition (bond, project)”.**

### GBGLs-1-1 Use of proceeds

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
☉	1-1-①	Green Bond proceeds should be allocated to Green Projects that state the clear environmental benefits, which should be assessed by the issuer.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Confirmed documents: <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Plan for Global Warming Countermeasures</li> <li>- Sector-specific technology roadmap</li> <li>- Assessment documents</li> </ul> Interview with the Issuer	DNV has confirmed through the Framework and the assessment that all proceeds raised by the Issuer from the transition bond will be allocated to eligible projects selected through the process of project evaluation and selection of eligibility criteria and eligible projects set out in the Framework. DNV has also confirmed that the environmental benefits of the use of proceeds will be assessed by the Issuer.

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
○	1-1-①	Environmental benefit of Green Bond proceeds, where feasible, quantification is recommended.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-1-①	DNV has confirmed that the environmental benefits of the eligible projects as the use of proceeds are quantified by the Issuer to the extent practicable.
◎	1-1-④	In advance, issuers should provide investors with information regarding the use of Green Bond proceeds through legal documentation (such as a prospectus) or other documents.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-1-①	The use of proceeds will be disclosed in the statutory documents prior to the issuance of the transition bond, if it is selected in advance. If the use of proceeds is not selected prior to the issuance of the transition bond, it will be disclosed in the reporting after the issuance of the transition bond.
◎	1-1-⑤	The provision of the information regarding the use of proceeds should specify the Green Project categories.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-1-①	DNV has confirmed that the Issuer intends to explain to investors through the Framework, statutory documents, etc. that the proceeds will be allocated to one or more of the eligibility criteria set out in Schedule-1.
○	1-1-⑤	In the cases where individual Green Projects have been specified, it is recommended that issuers clearly present the projects to investors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-1-①	DNV has confirmed that the Issuer intends to clearly indicate the eligible projects through statutory documents etc. if the use of proceeds has been selected prior to the issuance of the transition bond.
◎	1-1-⑥	In cases where Green Projects have incidental negative environmental impacts along with the alleged environmental benefits, the issuers should include information regarding these negative impacts (e.g., how they are assessed, what the issuers do to	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-1-①	DNV has confirmed that, when selecting eligible businesses (projects), the Issuer will ensure to take negative environmental and social impacts into account (including the necessary procedures in the region where the project is to be implemented) and that the

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
		<p>curb them) to investors so that the investors and market participants can appropriately evaluate these impacts.</p>			<p>proceeds are not allocated to projects related to the separately specified exclusion criteria.</p> <p>DNV has also confirmed through the assessment that the Issuer will consider the negative impacts of projects at the project implementation stage and the impacts on the relevant supply chain, including Just Transition, mitigation of negative impacts (e.g., actions through environmental impact assessment) and avoidance of lock-in, as indicated in CTF-4.</p> <p>DNV has confirmed that in cases where the use of proceeds is selected prior to the issuance of the transition bond and has a material negative impact on the environment, the Issuer intends to explain its approach to investors through statutory documents etc.</p>
○	1-1-⑦	<p>(In case of where a part of Green Bond proceeds is used to refinance existing Green Projects,) it is recommended that the issuers provide information to the investors regarding i) the amount (or the share) of the bond proceeds being allocated for refinancing, and ii) which Green Projects (or Green Project categories) may be refinanced, and iii) the target period of green projects subject to refinancing (the look-back period).</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-1-①	<p>DNV has confirmed that if the amount or percentage to be refinanced by the Issuer is known prior to the issuance of the transition bond, it will be clarified in the statutory documents etc. DNV has also confirmed that if it is not clear prior to the issuance, the Issuer intends to clarify the approximate amount (or percentage) of the portion allocated as refinancing in the post-issuance reporting.</p>

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
©	1-1-⑦	When Green Bonds are issued multiple times to refinance an asset that requires long-term maintenance, the issuer should clearly disclose the asset's age and remaining useful life and the amount to be refinanced as at the time of the bond issuance, evaluate the long-term sustainability of environmental benefits and obtain an assessment from an external reviewer for verification.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-1-①	<p>DNV has confirmed that the Issuer has no current plans of allocation to refinancing to eligible projects that are long overdue (more than two fiscal years before issuance).</p> <p>DNV has confirmed that, in the event that refinancing is targeted, a reasonable look-back period (e.g., at the time of refinancing, the eligibility of the project is maintained at present and the environmental benefits will last during the redemption period, or clear environmental benefits can be expected in the future) will be set.</p>



## GBGLs-1-2 Process for Project Evaluation and Selection

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings												
©	1-2-①	In advance, issuers should provide investors with information regarding the following: The environmental sustainability objectives that the issuers intend to achieve through Green Bonds.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	<p>Confirmed documents:</p> <ul style="list-style-type: none"> <li>- Framework</li> <li>- Basic Policy for the Realization of GX (roadmap)</li> <li>- Sector-specific technology roadmap</li> <li>- GX Implementation Council documents</li> <li>- Assessment documents</li> </ul> <p>Interview with the Issuer</p>	<p>DNV has confirmed that the Issuer intends to explain the environmental targets it intends to achieve through the transition bond through the Framework etc.</p> <p>Specifically, the environmental targets include the following:</p> <table border="1"> <thead> <tr> <th>Fiscal year</th> <th>Targets</th> <th>CO<sub>2</sub> emissions</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>Base year</td> <td>1.408 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2030</td> <td>CO<sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)</td> <td>0.76 billion t-CO<sub>2</sub></td> </tr> <tr> <td>2050</td> <td>Carbon neutrality</td> <td>0 billion t-CO<sub>2</sub></td> </tr> </tbody> </table>	Fiscal year	Targets	CO <sub>2</sub> emissions	2013	Base year	1.408 billion t-CO <sub>2</sub>	2030	CO <sub>2</sub> emissions: 46% reduction (Ibid. challenging the 50% reduction)	0.76 billion t-CO <sub>2</sub>	2050	Carbon neutrality	0 billion t-CO <sub>2</sub>
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2050	Carbon neutrality	0 billion t-CO <sub>2</sub>															
©	1-2-①	In advance, issuers should provide investors with information regarding the following: The criteria for determining the appropriateness of Green Projects based on the environmental sustainability objectives described above.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	<p>DNV has confirmed that the Issuer, in evaluation and selection of eligible projects, satisfies the assessment criteria (internal criteria, with the main criteria described in the Framework) set out for each eligibility criterion classified in 14 categories based on the types set out in the GX Roadmap as activities necessary for the realization of the Issuer's Transition Strategy, and that the Issuer selects eligible projects based on the basic conditions and priority assessment set out in the roadmap. DNV has also confirmed</p>												

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
					that the Issuer intends to explain the assessment criteria (and examples of eligible projects selected based on the assessment criteria) to investors through the Framework or statutory disclosure documents.
©	<b>1-2-①</b>	In advance, issuers should provide investors with information regarding the following: The process for determining how Green Projects fit the criteria for the achievement of the environmental sustainability objectives (The process for the determination refers to the reason why issuers determine that Green Projects can provide environmental benefits appropriately in light of the objectives and criteria for the use of Green Bond proceeds, how and by whom are the criteria applied and used to determine whether Green Projects are appropriate in light of the objectives, and the like).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	<p>DNV has confirmed that the Issuer intends to explain to investors, through the Framework, statutory disclosure documents, etc., the process for determining the eligibility of projects as the use of proceeds.</p> <p>Specifically, eligible projects to which the proceeds will be allocated will be confirmed by the “Intergovernmental Committee on the Issuance of GX Economy Transition Bonds,” consisting of Director-Generals, to be consistent with the “GX Promotion Strategy” and conform to the selection criteria set out in GBP-1 for each eligibility criterion by the Issuer. The eligibility of projects is assessed and selected through discussions with relevant ministries and agencies as necessary, and finally reported to the “GX Implementation Council,” chaired by the Prime Minister.</p> <p>&lt;Members of the Intergovernmental Committee&gt;</p> <ul style="list-style-type: none"> <li>• Cabinet Secretariat</li> <li>• Financial Services Agency</li> <li>• Ministry of Finance</li> <li>• Ministry of Economy, Trade and Industry</li> </ul>

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
					<ul style="list-style-type: none"> <li>Ministry of the Environment</li> </ul>
©	1-2-①	<p>In advance, issuers should explain to investors the supplemental information regarding the "process for identification, mitigation, and management of environmental and social risks that may be incidentally posed by the project"(i.e., the way to identify whether there are significant negative impacts on the environment and society and whether there are environmental and social risks in implementing the project, and mitigate and manage such impacts and risks).</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	<p>DNV has confirmed that, when selecting eligible businesses (projects), the Issuer will ensure to take negative environmental and social impacts into account (including the necessary procedures in the region where the project is to be implemented) and that the proceeds are not allocated to projects related to the following exclusion criteria.</p> <p>DNV has also confirmed through the assessment that the Issuer will consider the negative impacts of projects at the project implementation stage and the impacts on the relevant supply chain, including Just Transition, mitigation of negative impacts (e.g., actions through environmental impact assessment) and avoidance of lock-in, as indicated in CTF-4.</p> <p>&lt;Exclusion criteria&gt;</p> <ul style="list-style-type: none"> <li>Businesses with the purpose of manufacture or distribution of inhumane weapons such as nuclear, chemical, biological and other weapons of mass destruction or anti-personnel landmines, or businesses engaged in the manufacture of products or provision of services supporting manufacture or sale of inhumane weapons such as nuclear, chemical, biological and other weapons of</li> </ul>

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
					<p>mass destruction or anti-personnel landmines;</p> <ul style="list-style-type: none"> <li>• Businesses related to coal mining, refining or transportation;</li> <li>• Businesses related to the ownership or operation of gambling facilities or businesses;</li> <li>• Businesses related to forced labor or businesses related to unfair trade, bribery, corruption, extortion, embezzlement or other inappropriate relationships that do not comply with the laws and regulations of the country where the business is located.</li> </ul>
○	1-2-⑥	It is recommended that the issuers explain to investors in advance any environmental standards or certifications that the issuers will refer to in evaluating and selecting a Green Project to be financed.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	DNV has confirmed that the Issuer, in the evaluation and selection of the transition bond, will explain the assessment criteria set for each eligibility criterion, including standards such as CTFH/CTFBG, GBP/GBGLs, etc., through the Framework etc. (The Framework provides examples of the main criteria, but DNV has confirmed that the Issuer's internal or publicly available criteria/processes are followed in the actual evaluation and selection.)
○	1-2-⑧	It is recommended that internal groups who have expertise, such as the environment related group, or external institutions check whether the	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	DNV has confirmed that the adequacy of the Issuer's process for project evaluation and selection is ensured by the ministry with jurisdiction over the eligible project in accordance with the Issuer's internal or

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
		determination process is suitable from an environmental point of view.			publicly available criteria/processes and, where necessary, with advice from professional experts etc.
○	1-2-⑩	It is recommended that issuers position their environmental objectives, criteria and information on their processes in the context of their comprehensive environmental sustainability objectives, strategy, policies and so on (e.g., medium-term management plan and sustainability/ESG strategy) when explaining them to investors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	DNV has confirmed that the Issuer's criteria and processes are aligned with overarching goals, strategies and policies, based on the roadmap and relevant environmental plans and strategies. These can be understood through the Framework. DNV has also confirmed that the Issuer intends to explain them to investors through the Framework.
○	1-2-⑪	When setting requirements for eliminating the potential negative environmental and social effects of a green project (such as the appropriateness of the business category of a green project) as criteria, it is desirable to disclose relevant information and environmental standards and certifications referenced (Annex 1 of the Guidelines, the Taxonomy, and other environmental standards and certifications).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	Same as 1-2-①.  The Issuer identifies, mitigates and, where necessary, eliminates negative environmental and social impacts through an environmental impact assessment etc. DNV has confirmed through the assessment that there is a process to identify negative impacts specific to the target project when selecting the target project.
○	1-2-⑫	When referring to standards, certifications, etc., it is recommended that the issuers explain how the actual green projects, etc. comply with	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	DNV has confirmed that the eligibility criteria set out in the Issuer's Framework focus on capital investment and research in green projects classified under the GBP, a widely recognized international standard (e.g., the

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
		referenced environmental standards, certifications, etc.			renewable energy sector and energy saving sector (energy efficiency etc.)), and also include activities that should be undertaken at present in order to achieve future carbon neutrality (e.g., initiatives for phasing out fossil fuel use, the utilization of nuclear power), such as eligibility criteria classified as low-carbon and decarbonized energy.
○	1-2-⑩	When utilizing external certification, it is recommended that issuers not only satisfy the certification requirements but also explain the environmental benefits to be achieved.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable	Same as 1-2-①	The Issuer has no specific plans to utilize external certification at present.
○	1-2-⑬	It is recommended that issuers put a process in place to identify mitigation measures for potentially significant environmental and social risks posed by green projects (including implementation of a clear and appropriate trade-off analysis and necessary monitoring when assessing potential risks as significant).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-2-①	<p>Same as 1-2-①.</p> <p>The Issuer identifies, mitigates and, where necessary, eliminates negative environmental and social impacts through an environmental impact assessment etc. In addition, the Issuer intends to require the implementer of eligible projects to take action in accordance with the plan if the result of an environmental impact assessment etc. shows the need for continuous monitoring.</p>

## GBGLs-1-3 Management of Proceeds

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
©	1-3-①	Issuers should track and manage the net Green Bond proceeds in an appropriate manner. These tracking and managing activities should be controlled by the issuer's internal process.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Confirmed documents: - Framework - Assessment documents  Interview with the Issuer	<p>The Ministry of Economy, Trade and Industry (METI) to be responsible for the allocation and management of proceeds using an internal management system. The proceeds of the Climate Transition Bond will be received in the Energy Supply and Demand Account of the Special Account for Energy Measures and will be managed separately from other accounts.</p> <p>Specifically, the procurement is carried out by the Ministry of Finance, and after payment to the Accounting Office of the Agency for Natural Resources and Energy, revenue and expenditure management is carried out using an internal management system. The Accounting Office of the Agency for Natural Resources and Energy manages the allocation of proceeds through the allocation to the private sector etc. via the responsible office and ministry.</p>
©	1-3-②	As long as the Green Bonds are outstanding, issuers manage the amount of the allocation to the green project is equal to or more than proceed, or issuers should periodically (at least once a year) adjust to match the amount of the total Green Bond proceeds to the sum of the amount of the proceeds allocated to	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-3-①	The management status of the proceeds allocation can be tracked on an eligible project basis as "costs for measures to promote a smooth transition to a decarbonized growth economic structure" using an internal management system from the issuance of the transition bond until the redemption.

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
		Green Projects and the amount of the unallocated proceeds.			The Issuer will be subject to annual inspections by the Board of Audit of Japan of its proceeds management results. During the inspections by the Board of Audit of Japan, the climate transition bond-specific management process required under GBP-3 will also be inspected.
◎	1-3-②	If any of the proceeds remains temporarily unallocated, the issuer should explain to investors how it intends to manage the balance of such unallocated funds and endeavour to promptly allocate such funds to Green Projects.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-3-①	All unallocated proceeds will be managed in cash until the proceeds are allocated to eligible projects and will not be allocated to other temporary investments (including green investments) etc.
○	1-3-④	It is recommended that management of the proceeds should be supplemented by an external auditor or other third- party organization.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-3-①	Same as 1-3-②.  The Issuer will be subject to annual inspections by the Board of Audit of Japan of its proceeds management results. During the inspections by the Board of Audit of Japan, the climate transition bond-specific management process required under GBP-3 will also be inspected.
◎	1-3-⑥	In advance, issuers should provide investors with information on how Green Bond proceeds will be tracked and managed.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-3-①	Same as 1-3-②.  The management status of the proceeds allocation can be tracked on an eligible project basis as “costs for measures to promote a smooth transition to a decarbonized growth



Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
					economic structure" using an internal management system from the issuance of the transition bond until the redemption.
○	1-3-⑦	It is recommended that issuers keep evidenced documents appropriately that demonstrate how they tracked and managed Green Bond proceeds.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-3-①	The internal management system is available throughout the redemption period and is kept in appropriate documentation.
◎	1-3-⑨	In advance, issuers should provide investors with information on how unallocated Green Bond proceeds will be managed when the Green Projects that will receive the Green Bond proceeds have not been determined, or when such Green Projects have been determined but the proceeds have not been allocated because the allocation timing has not yet arrived.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-3-①	Same as 1-3-②.  All unallocated proceeds will be managed in cash until the proceeds are allocated to eligible projects and will not be allocated to other temporary investments (including green investments) etc. Same as 1-3-⑨.
○	1-3-⑩	It is recommended that issuers manage unallocated Green Bond proceeds as an asset with high liquidity and safety such as cash, cash equivalents, or short-term financial assets	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable	Same as 1-3-①	

## GBGLs-1-4 Reporting

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
©	1-4-①	Issuers should publicly disclose the latest information on the use of Green Bond proceeds after issuance and post it in a place where reference is easily made by investors (including on its website).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Confirmed documents: - Framework - Assessment documents  Interview with the Issuer	DNV has confirmed that the Issuer will disclose the allocation status of the proceeds on an annual basis on the Government's website, at least until the proceeds has been fully allocated.  In the event of a significant change in the progress status of projects to which the proceeds are allocated or environmental benefits (significant process changes, changes in specifications, delays in the expected environmental benefits or their acting timing, etc.), the Issuer will disclose it even after the completion of the proceeds allocation.
©	1-4-②	Issuers should disclose the latest information at least once a year until all the proceeds are used and whenever there has been a major change in the situation. They should disclose such information in a timely manner even after all the proceeds are allocated if there has been any major change in the situation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	
©	1-4-③	Disclosed information should include the following contents: <ul style="list-style-type: none"> <li>• A list of the Green Projects to which Green Bond proceeds have been allocated</li> <li>• A brief description of each Green Project (including up-to-date progress)</li> <li>• The amount allocated to each Green Project</li> <li>• The expected environmental benefits of each Green Project</li> <li>• Information regarding unallocated Green Bond proceeds (the amount of</li> </ul>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	DNV has confirmed that the Issuer intends to include the following as disclosure information. The impact reporting will be disclosed on an annual basis on the Government's website on a project-by-project or eligibility criteria basis, taking into account confidential obligations and the extent practicable.  [Allocation status reporting] <ul style="list-style-type: none"> <li>• Allocated amount and unallocated balance</li> <li>• Estimated amount of the proceeds allocated in the fiscal year prior to the issuance</li> </ul>

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
		the unallocated proceeds or the share of the unallocated proceeds to the total amount of the proceeds, when the unallocated proceeds are expected to be allocated to Green Projects, and how the unallocated proceeds are managed until allocation)			<p>[Impact reporting] (environmental benefits reporting)</p> <ul style="list-style-type: none"> <li>Key environmental benefits (direct and indirect benefits related to GHG emission reduction etc., and benefits expected in the future)</li> <li>Progress status of projects</li> </ul> <p>In the event of a significant change in circumstances in eligible projects (e.g., significant process changes, suspension/discontinuation, changes in specifications that have a significant impact on the environmental benefits) during the redemption period of the bond after allocations have commenced, the Issuer will disclose it in a timely manner or through reporting.</p>
○	1-4-④	If Green Bond proceeds have been allocated to the refinancing of existing projects, it is recommended that disclosed information include: 1) the approximate amount (or the share) of the allocated proceeds used for refinancing, and 2) a list of the Green Projects (or the project categories) refinanced.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	DNV confirmed that the Issuer intends to disclose in its annual reporting the estimated amount of any portion of the proceeds allocated to refinancing (allocated in the fiscal year prior to the time of issuance), as per 1-4-③.
○	1-4-⑤	While it is recommended to disclose 4-③ and 4-④ on a project-by-project basis, if there are confidentiality agreements, competitive considerations, or a large number of underlying projects that limit	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	DNV has confirmed that the Issuer intends to disclose information on an individual green project or eligibility criteria basis, taking into account practical considerations and confidential

Ref.	Section	Requirements/Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
		the disclosure of details, it is considered that information is presented in generic terms or in an aggregated portfolio.			obligations, while ensuring transparency as much as possible.
©	1-4-⑦	When disclosing information regarding the expected environmental benefits of projects, issuers should use appropriate indicators while ensuring consistency with the “environmental sustainability objectives,” the “criteria” for Green Projects specified in Section 2, “Process for Project Evaluation and Selection,” and the characteristics of Green Projects.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	DNV has confirmed that the Issuer will select appropriate indicators on key environmental benefits (direct and indirect GHG emission reduction effects as well as future expectations) for the disclosure of environmental benefits based on the characteristics of eligible businesses.
○	1-4-⑨	When disclosing the expected environmental benefits of projects, it is recommended that issuers, where feasible, use quantitative indicators and disclose information on methodologies and/or assumptions as well as these indicators.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	DNV has confirmed that, for projects where quantification is practicable, quantitative environmental benefits will be estimated by the Issuer or operator and reported together with calculation methods and assumptions, where necessary.

## GBGLs-2-1 Green Bond Framework

Ref.	Section	Requirements/ Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
◎	2-1-①	<p>Issuers should provide explanation to investors through legal documents such as the Green Bond Framework or a prospectus that the Green Bond or Green Bond program is aligned with four core elements (Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, and Reporting).</p> <p>In addition, these documents should be posted in a place where reference is easily made by investors (including on its website).</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	<p>DNV has confirmed that the Issuer has described in the Framework (i) the four common elements of CTFH/CTFBG, consisting of disclosure items related to the transition strategy etc. required for a transition bond, and (ii) the four core elements of green bonds, consisting of elements required to manage a transition bond with use of proceeds, and that conformity with the four elements will be disclosed.</p> <p>DNV has confirmed that the Framework is planned to be published on the Government's website and disclosed to the public, including investors.</p>
○	2-1-②	It is recommended that issuers summarise in the Green Bond Framework relevant information in the context of the issuer's overarching sustainability/ESG strategy.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	DNV has confirmed that the Framework summarizes information on Japan's past initiatives and strategies for comprehensive environment (in particular, mitigation of climate change), mainly in Section 1 and Sections 1.1 to 1.3.
○	2-1-②	It is recommended that issuers disclose all environment-related standards and certifications (Appendix 1 of the Guideline, the Taxonomy and other environmental standards and certifications) that were referenced in the	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	The Issuer identifies, mitigates and, where necessary, eliminates negative environmental and social impacts through an environmental impact assessment etc. DNV has also confirmed through the assessment that there is a process to identify negative impacts specific to the target project when selecting

Ref.	Section	Requirements/ Evaluation Items	Requirement Check	Work Undertaken	DNV Findings
		selection of projects.			the target project (same as 1-2-①). An overview of these will be disclosed in the Framework.
○	<b>2-1-②</b>	When referring to standards, certifications, etc., it is recommended that issuers explain how the green and other projects are aligned with the referenced environmental standards, certifications, etc.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	DNV has confirmed that the eligibility criteria set out in the Issuer's Framework focus on capital investment and research in green projects classified under the GBP, a widely recognized international standard (e.g., the renewable energy sector and energy saving sector (energy efficiency etc.)), and also include activities that should be undertaken at present in order to achieve future carbon neutrality (e.g., initiatives for phasing out fossil fuel use, the utilization of nuclear power), such as eligibility criteria classified as low-carbon and decarbonized energy (same as 1-2-⑩).
○	<b>2-1-②</b>	When utilizing external certification, it is recommended that issuers not only satisfy the certification requirements but also explain the environmental benefits to be achieved.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	Same as 1-4-①	The Issuer has no specific plans to utilize external certification at present (same as 1-2-⑩).

## Appendix-1 List of Reference Materials

- /01/ Climate Transition Bond Framework; Cabinet Secretariat, Financial Services Agency, Ministry of Finance, Ministry of Economy, Trade and Industry, Ministry of the Environment
  - /02/ The Basic Policy for the Realization of GX (a roadmap for the next 10 years); February 2023
  - /03/ The Basic Policy for the Realization of GX Reference material; February 2023
  - /04/ Plan for Global Warming Countermeasures; 22 October 2021
  - /05/ Long-term strategy as a growth strategy under the Paris Agreement; 22 October 2021
  - /06/ The (6th) Strategic Energy Plan; October 2021
  - /07/ Japan's NDC (Nationally Determined Contribution)
  - /08/ GHG emissions and absorptions in FY2021 (confirmed values)
  - /09/ GX Implementation Council documents, minutes and agendas \*July 2022 to October 2023 (1st to 7th meetings)
  - /010/ Classification of eligibility criteria (list of candidate use of proceeds)
  - /011/ Assessment documents
    - List of questions for third-party evaluation bodies (version 24 October 2023)
    - Execution management of GX bonds (Government Accounting System (ADAMS II))
    - Explanatory material on eligible categories and projects
- Other information on the government's and ministries' websites and disclosure documents