

Basic Guidelines on Climate Transition Finance

2025 Edition

March 2025

Financial Services Agency;
Ministry of Economy, Trade and Industry;
and Ministry of the Environment, Japan



Table of Contents

Chapter 1	Introduction	1
1.	Background and Purpose of the Basic Guidelines	1
2.	Developments after Formulation of Guidelines and Purpose of Revision	3
3.	Standpoint of these Basic Guidelines	5
Chapter 2 Overview of Transition Finance		7
1.	What is Transition Finance?	7
2.	Disclosure Elements Required in Transition Finance	7
(1)	Transition Finance in ICMA	7
(2)	Transition Finance in these Guidelines (2025)	8
3.	Positioning of these Basic Guidelines	9
(1)	Domestic and International Cases of Transition Finance (For details, see Appendix 2)	9
(2)	Various Perspectives on Transition Finance	9
(3)	Positioning of these Basic Guidelines	10
Column: Taxonomies and Roadmaps		11
Chapter 3 Expectations in Transition Finance and Specific Approaches		12
1.	Overview of expected disclosure elements in transition finance	12
2.	Specific Approaches to Respective Disclosure Elements	13
(1)	Element 1: Fundraiser's Climate Transition Strategy and Governance	13
(2)	Element 2: Business Model Environmental Materiality	15
Column: Understanding of Scope 3 Emissions		17
(3)	Element 3: Climate transition strategy and targets to be science-based	18
Column: Avoided Emissions of Product (AEP) and Reduced Emissions of Product (REP)		20
(4)	Element 4: Implementation Transparency	21
Appendix1. The Taskforce on Developing an Environment for Transition Finance (2024)		23
Appendix2. Case Studies on Transition Finance		25

Chapter 1 | Introduction

1. Background and Purpose of the Basic Guidelines

The Paris Agreement, which was adopted in 2015, set out a long-term universal goal to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels".

In addition, the Special Report on Global Warming of 1.5°C (SR15) published by the IPCC¹ (Intergovernmental Panel on Climate Change) points out that for global warming to be limited to 1.5°C, global human-caused emissions of carbon dioxide would need to reach "net zero" around 2050.

In Japan, then-Prime Minister Suga declared in his first policy speech on October 26, 2020 that he would aim to achieve a carbon neutral, decarbonized society by 2050. Subsequently on December 25, the "Green Growth Strategy Through Achieving Carbon Neutrality" was formulated. The strategy represents an industrial policy that allows for a shift from the conventional view where the mitigation of global warming is costly and weighs down economic growth, to one based on proactive action to generate innovation in industrial structures and social economy, thereby creating a positive cycle of economic growth and environmental protection. The government declared that it will, through every possible policy measure and means, strongly support private companies to make forward-looking efforts to make bold investments and innovate.

It is said that cumulative global investment of approximately 7,370 trillion yen by 2040 will be needed to achieve the Paris Agreement (based on IEA World Energy Outlook 2020).² In the financial sector, the number of financial institutions that give consideration to actions to combat climate change have increased, driving growth in sustainable investments, while corporations are also strongly encouraged to address climate change.

Under these circumstances, the EU has advocated for sustainable finance measures and put in place a "taxonomy" that classifies green economic activities as the first step in its action plan to mobilize financing for initiatives that promote sustainable development, particularly measures against climate change.

From the viewpoint of steadily reducing greenhouse gas (GHG) emissions around the world to achieve the Paris Agreement's goal, it is important to promote a transition to decarbonization, including decarbonization initiatives in the hard-to-abate sectors (the industrial and energy conversion sectors that currently face challenges in decarbonization), in addition to further promoting green investment in areas such as renewable energy. For this reason, there is a growing recognition of the need to provide financing for energy efficiency and other initiatives toward decarbonization and for initiatives that contribute to the transition, such as long-term research and development.

On the basis of the above recognition and in light of these recognitions and international trends, the International Capital Markets Association (ICMA) published the "Climate Transition Finance Handbook" (hereinafter referred to as "ICMA Handbook") in December 2020.

In Japan, discussions on how to promote financing for initiatives that contribute to the transition to a decarbonized society have progressed³, and the Basic Guidelines were formulated with the aim to facilitate financing to contribute to achieving the 2050 carbon-neutral goals and the Paris Agreement, by popularizing and establishing the position of climate transition finance (hereinafter referred to as "transition finance"), as a means of financing transitions especially in hard-to-abate sectors, which was then in its nascent age, through ensuring its credibility for labeled finance.

To this end, the Guidelines provide specific actions and interpretations tailored to Japan's characteristics so that they can serve

1 IPCC stands for Intergovernmental Panel on Climate Change. The IPCC provides comprehensive assessments on climate change, its underlying physical-science-based factors, implications and risks as well as adaptation and mitigation options against climate change from scientific, technical and social economic viewpoints.

2 According to the IEA World Energy Outlook 2024, global investment to clean energy technologies and infrastructure in 2024 is estimated to reach \$2 trillion annually, marking a significant expansion from approximately \$1.2 trillion in 2020 over the span of five years. However, under the NZE Scenario outlined in the same report, an investment of around \$5.2 trillion will be required by 2035, highlighting the need for further scaling up of investments.

3 "Climate Innovation Finance Strategy 2020" (Ministry of Economy, Trade and Industry, 2020).

as a reference for the fundraiser⁴, the financier⁵ and other market participants when they consider concrete actions to transition finance, while taking into account the alignment with the ICMA Handbook. At the request of the Taskforce on Preparation of Environment for Transition Finance, ICMA has provided input into the formulation of these Guidelines while also confirming that it welcomes the proposed alignment with the ICMA Handbook.

⁴ A fundraiser refers to both a bond issuer and a loan receiver.

⁵ A financier refers to financial institutions and investors including banks and asset managers, insurance companies and pension funds.

2. Developments after Formulation of Guidelines and Purpose of Revision

Since the formulation of the Basic Guidelines in 2021, Japan has been advancing market development for transition finance, utilizing public-private working groups. By the end of fiscal year 2022, roadmaps indicating sector-specific transition technologies for ten high-GHG-emission sectors were formulated⁶, and in 2023, the "Transition Finance Follow-up Guidance" focusing on post-execution was issued. Additionally, in the same year, the "Addressing the Challenges of Financed Emissions" was developed, providing measures for financial institutions executing transition finance to address the temporary increase in emissions come from their borrowers/investees (financed emissions). As a result of these measures, the transition finance market by private companies, centered on high-GHG-emission industries, has grown to a cumulative issuance exceeding 2.3 trillion yen⁷ by the end of 2024. Furthermore, in February 2024, as part of the Green Transformation (GX) policy, the issuance of the world's first government transition bond, Japan Climate Transition Bonds, began, aiming for realizing over 150 trillion yen in public private investment for decarbonization over the next decade and further development of the transition finance market as a leading market through public-private collaboration.

Looking at global affairs since the formulation of these Basic Guidelines, the Russian military invasion of Ukraine has heightened the recognition of the importance of stable energy supply and the need to accelerate efforts towards an early transition to a decarbonized society. Under these circumstances, at the 28th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 28), momentum has been maintained in pursuing the Paris Agreement's goal of keeping the temperature increase well below 2°C and aiming for 1.5°C. Meanwhile, with the expected increase in electricity demand due to the progress of DX and GX, such as the increase in demand for data centers and semiconductor factories, securing the necessary decarbonized power sources could affect international competitiveness. In this context, international organizations and initiatives such as the Climate Bonds Initiative (CBI), Organization for Economic Co-operation and Development (OECD), and the Glasgow Financial Alliance for Net Zero (GFANZ) have successively published guidance and reports on transition finance⁸. Furthermore, the importance of transition finance has been emphasized in the G7 Hiroshima Leaders' Communiqué in July 2023. As a result, there is a growing international recognition of the importance of transition finance as a tool to promote further investments for decarbonization. In Asia, regional efforts are progressing, such as the issuance of the "ASEAN Transition Finance Guidance"⁹, and in the "Action Plan for the Next Decade" adopted at the leaders meeting in October 2024, the promotion of transition finance was included, and its importance was reaffirmed among the leaders within the framework of the Asia Zero Emission Community (AZEC)¹⁰.

Amidst these developments, the ICMA Handbook was revised in June 2023, broadening the scope of transition finance to include green bonds and sustainability bonds, and detailing disclosure content based on actual issuance cases. The revision of the Basic Guidelines is conducted in light of the revision of the ICMA Handbook and the aforementioned developments.

This update of the Basic Guidelines is built upon the use cases of the Guidelines formulated in 2021 and aim to further strengthen the credibility of financing labeled as transition finance, thereby facilitating the expansion of the market. Ultimately, the goal is to contribute to achieving Japan's 2050 carbon-neutral goals and the Paris Agreement. While considering alignment with the revised ICMA Handbook, these Guidelines provide examples of responses and interpretations tailored to Japan's characteristics to serve as a reference for fundraisers, financiers, and other market participants when considering specific

6 The ten sectors, which include the iron and steel, chemical, electric power, gas, oil, pulp and paper, cement, and automobile sectors, along with the marine transport and aviation sectors formulated by the Ministry of Land, Infrastructure, Transport and Tourism, cover over 80% of Japan's GHG emissions. (Based on the emissions of fiscal year 2021)

7 The cumulative domestic issuance amount of bonds and loans under the "transition" label, including undisclosed loan procurement amounts based on the interviews and other sources.

8 ["Transition Finance for Transforming Companies"](#) (CBI, 2022), ["Guidance on Transition Finance"](#) (OECD, 2022), ["Expectations for Real-economy Transition Plans"](#) (GFANZ, 2022), etc.

9 ["ASEAN Transition Finance Guidance"](#) (ASEAN Capital Markets Forum, 2023), ["ASEAN Transition Finance Guidance V.2"](#) (ASEAN Capital Markets Forum, 2024).

10 [Asia Zero Emission Community \(AZEC\)](#)

actions related to transition finance.

Three years have passed since the Basic Guidelines was originally released, and during the time, the cases of transition finance have accumulated, and the market formation in Japan is progressing smoothly. However, due to the growing international interest in transition finance, various organizations have presented their own definitions and frameworks, and as such a global common understanding of transition finance is still in progress. Transition finance can be regarded as a sophisticated finance method that delves into the essence of corporate strategy as it focuses on the medium-to-long-term transition strategies and their science-based targets and pathways at the corporate level. It is important to continue maintaining market soundness by accumulating high-quality practices. Additionally, the environment and trends surrounding sustainable finance continue to develop rapidly, requiring ongoing proactive efforts from fundraisers and understanding from financiers, along with creativity from both sides.

Fundraisers can enhance sustainability management through the development and disclosure of transition strategies, build relationships with financiers who highly value such initiatives, and aim to simultaneously achieve the promotion of their own decarbonization and the enhancement of corporate value while strengthening the funding base.

Financiers can contribute to the achievement of the Paris Agreement and the realization of a sustainable society and growth in Japan and the world by engaging and extending financing to fundraisers who intend to advance business reforms aligned with the Paris Agreement and are recognized as credible in their practices, while gaining profit from investments and financing.

The Guidelines provide the standpoint in Chapter 1, Section 3. Chapter 2 provides an overview of transition finance, focusing on its position in relation to the existing principles and guidelines. Finally, Chapter 3 describes the expectations on the fundraiser in transition finance and how to cope with.

3. Standpoint of these Basic Guidelines

The transition finance market should mature through a dialogue based on sufficient information between the fundraiser and the financier. The fundraiser is an entity considering climate change measures and making efforts towards achieving a decarbonized society. The financier is an entity that is willing to provide financial support, noting the credibility of the fundraiser's commitments and practices. It is ultimately up to the market to evaluate how appropriate the fundraiser's responses to transition finance are and whether they are eligible for investment and financing.

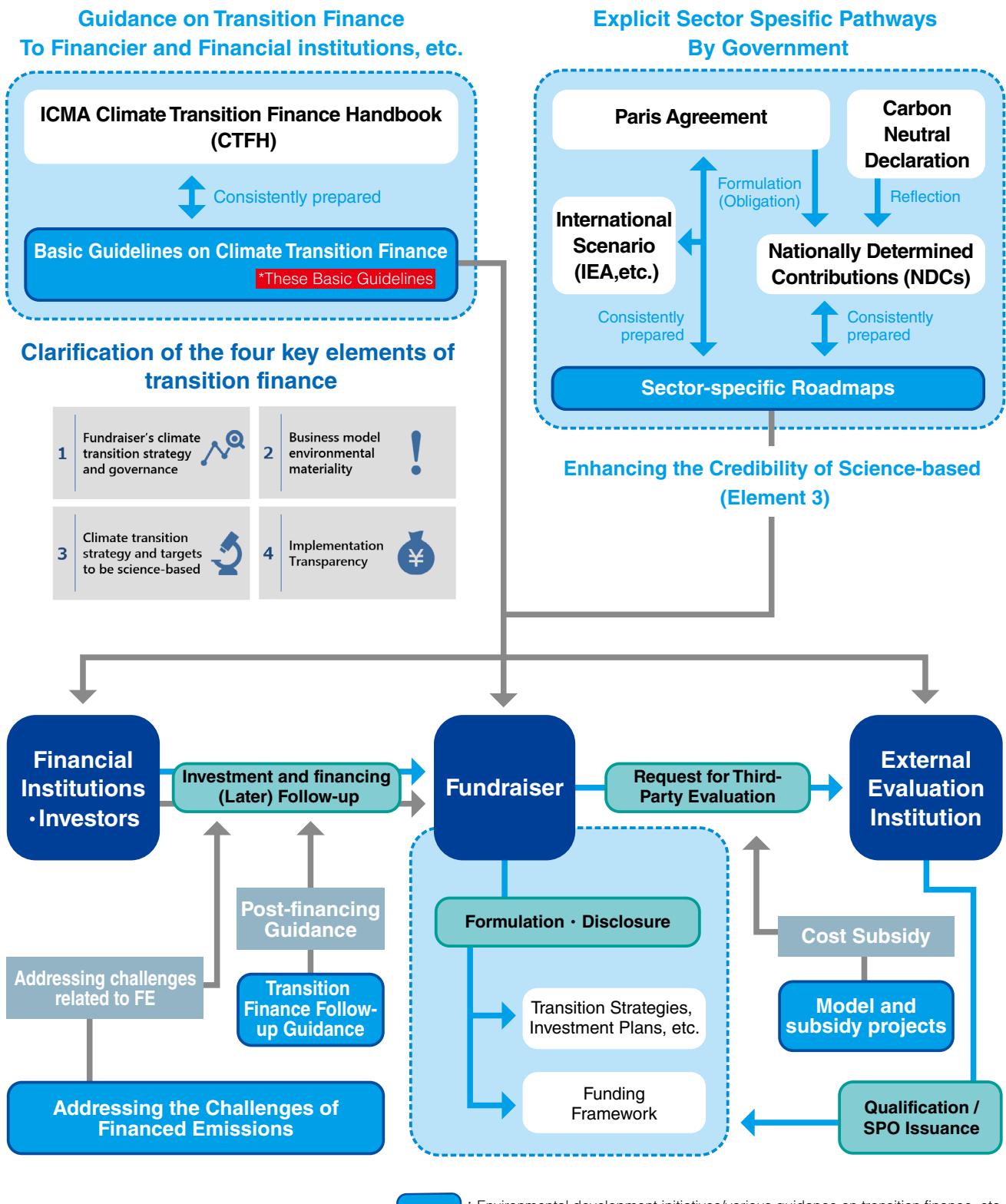
Meanwhile, organizing the expectations of transition finance will form the basis of dialogue between such the fundraiser and the financier. In addition, it will be useful when the fundraiser and the financier explain to their respective stakeholders that the fundraising and financing pertain to climate change-related transition.

In shaping and promoting the concept of transition finance in Japan, it is reasonable that the concept aligns with the international capital market consensus for transition. At the same time, it is also important to understand that a pathway to decarbonization will vary from country to country.

Based on these views, the Guidelines (2025) have been revised with due consideration on alignment with the ICMA Handbook. The ICMA Handbook recommends that the fundraiser provides four elements (Element 1: Issuer's climate transition strategy and governance; Element 2: Business model environmental materiality; Element 3: Climate transition strategy and targets to be science-based; and Element 4: Implementation transparency) and these Guidelines recommend those elements are disclosed. Financing in accordance with the provisions of these Guidelines can be recognized as transition finance domestically and internationally.

The Guidelines shall be primarily intended to be referenced for the preparation and execution of transition finance in Japan, but given that Japan has accumulated many credible transition finance issuances ahead of the international community, the Guidelines may be considered to be a model and have validity as a guide for transition finance, and can be referenced in other countries and regions in need of transition finance.

[Figure 1] Overall view of transition finance environment development measures in Japan



: Environmental development initiatives/various guidance on transition finance, etc.

Chapter 2 | Overview of Transition Finance

1. What is Transition Finance?

Transition finance¹¹ refers to a financing means to promote long-term, strategic GHG emissions reduction initiatives that are taken by a company considering tackling climate change for the achievement of a decarbonized society.

In Japan, with the aim to achieve 2050 carbon neutrality, defines transition finance as a finance for supporting the fundraiser who have set their target consistent with the Paris Agreement and satisfied the elements set forth in these Guidelines. However, the starting point and process of transition may vary depending on the country and region where the business is conducted and the sector to which it belongs, and the transition pathways of companies may also be diverse (therefore, the Guidelines do not limit the industries, technologies, or standards to be targeted).

The focus of transition finance is not only on individual use of proceeds or short-term quantitative target achievement, but also on the credibility of long-term transition strategies at the corporate level, which distinguishes it from other finance means. On the other hand, for financiers, it is necessary to evaluate the credibility and effectiveness of transition strategies of companies belonging to various regions and sectors. To address this, sector-specific technology roadmaps indicating specific transition directions for ten high-emission sectors have been formulated in Japan, as mentioned in the previous chapter. These roadmaps can assist fundraisers in formulating transition strategies consistent with the Paris Agreement, and financiers in evaluating the credibility and effectiveness of individual companies' transition strategies.

2. Disclosure Elements Required in Transition Finance

(1) Transition Finance in ICMA

The ICMA Handbook before revision defines investment as transition finance in debt markets for climate transition-related purposes, and recommends that the fundraiser disclose the following four key elements¹² to ensure the credibility of transition finance (hereinafter referred to as the "four key elements"):

- Element 1: Fundraiser's climate transition strategy and governance
- Element 2: Business model environmental materiality
- Element 3: Climate transition strategy and targets to be science-based
- Element 4: Implementation transparency

The ICMA Handbook after revision states that "Climate transition focuses principally on the credibility of an issuer's GHG emissions reduction strategy, commitments, and practices." and continues to recommend the disclosure of the four key elements. The ICMA Handbook can be referred to not only when financing is labeled as transition finance, but also when forming green, sustainability, or sustainability-linked bonds ("GSS" bonds) that incorporate transition elements. In the ICMA Handbook, it is indicated that the fundraiser may refer to the handbook when raising funds with a climate transition strategy in either of the following formats:

- (1) Use-of-Proceeds instruments: Bonds defined as those aligned to the Green Bond Principles or the Sustainability Bond Guidelines; or
- (2) General Corporate Purpose instruments: Bonds aligned to the Sustainability-Linked Bond Principles.

According to the provisions of the ICMA Handbook, transition finance can extend over the existing Green Bond Principles or the Sustainability Bond Guidelines and the Sustainability-Linked Bond Principles, regardless of whether the use of proceeds is specified or not.

In other words, transition finance as defined by ICMA is determined not only by the use of proceeds of the funds raised, but

¹¹ ICMA's "Climate Transition Finance Handbook" provides that "the concept of climate transition focuses principally on the credibility of an issuer's climate change-related commitments and practices".

¹² In the revision of ICMA Handbook, there were changes at the rhetorical level, but the meaning of the four key elements remains unchanged, and this is the same in these Basic Guidelines.

also by the credibility of the strategies and practices of the fundraiser.

(2) Transition Finance in these Guidelines (2025)

The Guidelines are organized with consideration for alignment with the aforementioned ICMA Handbook, while also taking into account bond and loan financing conducted under the name of transition finance (financing conducted using a "transition" label) as the market develops in Japan. The financial products covered by the Guidelines are as follows:

Use-of-Proceeds instruments: Bonds/loans that meet the four key elements recommended to disclose and have specified use of proceeds. The use of proceeds is broadly targets those expected to make a significant contribution to the fundraiser's transition strategy and green projects that directly contribute to the reduction of greenhouse gas emissions (*1), including projects linked to a "just transition."¹³

*1: Green projects: Those exemplified as eligible Green Projects in "Green Bond Principles"¹⁴ by ICMA and those with issuance records, issued while referring to the guidelines in Appendix 1 of the principles, which provide criteria for green projects that bring about clear environmental improvement effects.

Regarding the issuance process and other aspects, bonds must meet the four core components (Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, and Reporting) as defined by "Green Bond Principles" developed by ICMA in 2014 and revised in 2022, or "Green Bond Guidelines" developed by the Ministry of the Environment in 2017 and revised in 2024 in consistency with those principles (Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, and Reporting). Loans must meet the elements provided in "Green Loan Principles"¹⁵ issued by the Loan Market Association and "Green Loan Guidelines"¹⁶ developed by the Ministry of the Environment in consistency with the principles. (*2)

Note that even if issued as a green bond/loan, there may be market demand for the disclosure of transition finance elements, considering the growing trend of disclosure requirements related to transition plans, including IFRS S2: Climate-related Disclosures.

General Corporate Purpose instruments: Bonds/loans that meet the four key elements recommended to disclose, set targets aligned with the transition strategy (*3), and have borrowing conditions, etc., that vary according to the achievement of those targets.

*3: For example, those that use direct results of GHG emission reduction (absolute GHG emissions or emission intensity) or auxiliary indicators (indicators that serve as means to promote the achievement of GHG emission reduction targets) as KPIs.

Regarding the issuance process, general corporate purpose bonds, are required to meet the five core components (Selection of Key Performance Indicators (KPIs), Calibration of Sustainability Performance Targets (SPTs), Bond Characteristics, Reporting, and Verification) set forth in the "Sustainability-Linked Bond Principles"¹⁷ developed by ICMA in 2020 and revised in 2024, or "Sustainability-Linked Bond Guidelines" published in 2022 and revised in 2024 by the Ministry of the Environment, Japan¹⁸. General corporate purpose loans must meet the elements provided in the Sustainability-Linked Loan Principles¹⁹ issued by the Loan Market Association (LMA) and the Sustainability-Linked Loan Guidelines²⁰ developed by the Ministry of the Environment consistently with those principles. (*2)

13 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.

14 "Green Bond Principles" (ICMA, 2022)

15 "Green Loan Principles" (LMA, 2023)

16 "Green Loan and Sustainability-Linked Loan Guidelines" (Ministry of the Environment, Japan, 2024) (in Japanese).

17 "Sustainability-Linked Bond Principles" (ICMA, 2024)

18 "Green Bond and Sustainability-Linked Bond Guidelines" (Ministry of the Environment, Japan, 2024) (in Japanese)

19 "Guidance on Sustainability-Linked Loan Principles" (LMA, 2023)

20 "Green Loan and Sustainability-Linked Loan Guidelines" (Ministry of the Environment, Japan, 2024) (in Japanese).

While enabling a wider use of the funds raised, transition finance is a financing means that requires a clear strategy for achieving long-term goals aligned with the Paris Agreement. This ensures that the financing supports entities with more ambitious initiatives towards the future.

An entity that seeks transition finance is: (1) an entity²¹ with strategies and plans to meet the targets set for achieving decarbonization and procures funds to put initiatives into practice in line with those strategies and plans; and (2) an entity that procures funds for activities (including investments and loans) that enable transition toward decarbonization by another party.

*2: It is important for fundraisers to meet the four key elements of transition finance, such as a science-based transition strategy. Any financial instrument that fulfills these four key elements can also qualify as transition finance.²²

3. Positioning of these Basic Guidelines

As the importance of transition finance has been recognized, discussions on its definition are taking place worldwide, and various interpretations are being made. In Japan, there are various cases of transition finance utilization by diverse issuers and financial institutions as well²³. In organizing the positioning within the Basic Guidelines, the relationship with past domestic and international cases of transition finance and various concepts related to transition finance is as follows:

(1) Domestic and International Cases of Transition Finance (For details, see Appendix 2)

In Japan, transition finance is becoming widespread. In addition to financing with the "transition" label (transition bonds (Use-of-Proceeds instruments), transition-linked bonds (General Corporate Purpose instruments), transition loans (Use-of-Proceeds instruments), transition-linked loans (General Corporate Purpose instruments)), there are cases of financing with labels other than the transition label, such as green bonds and sustainability-linked bonds, that refer to the Basic Guidelines or the ICMA Handbook (2020 and 2023). While utilization is mainly seen in high-GHG-emission industries, there are also examples of transition finance utilization by a wide range of companies, including those in other industries. Financial institutions, including banks, insurance companies, and leasing companies, have also begun to publish their perspectives on transition finance and are advancing investments and loans based on them.

Internationally, financing that references the ICMA Handbook is often executed in the form of sustainability-linked loans or bonds with General Corporate Purpose instruments, but there are also cases of financing with the transition label seen in parts of Europe and Asia. Additionally, some banks in Europe, the U.S., and Asia are beginning to publish their perspectives on transition finance.

(2) Various Perspectives on Transition Finance

Various concepts of transition finance have been presented. For example, GFANZ outlines four key net-zero financing strategies as part of transition finance for financial institutions: Climate Solutions, 1.5°C Aligned, 1.5°C Aligning, and Managed Phaseout. Additionally, in the ICMA "Transition Finance in the Debt Capital Market,"²⁴ published in February 2024, transition finance is organized in the following four genres: 1) Economy-wide Transition, 2) Climate Transition, and 3) Hard-to-abate Transition. Furthermore, as means to expand transition finance, the following initiatives are being introduced: ①taxonomies, ②transition planning and disclosure, ③sector-specific roadmaps, and ④benchmarking ambition. Additionally, the "ASEAN Transition Finance Guidance Version 2"²⁵, published in October 2024, presents the concepts of "asset-level transition finance" and

21 Includes any special purpose company (SPC) established to finance specific projects.

22 Existing bonds that meet the "Social Bond Principles" (ICMA) and "Social Bond Guidelines" developed by the Financial Services Agency of Japan in 2021 in alignment with these principles, as well as those that satisfy the four key elements for transition finance, may also be applicable. While there may be other type of financial products qualified as transition finance, they are not covered in these Basic Guidelines due to the absence of existing principles or references. Additionally, the environment and trends surrounding sustainable finance continue to develop at an accelerated pace, and the emergence of new financial products is anticipated.

23 In the ICMA Handbook, it is stated that "Climate transition focuses principally on the credibility of an issuer's GHG emissions reduction strategy, commitments, and practices."

24 ["Transition Finance in the Debt Capital Market"](#) (ICMA, 2024)

25 ["ASEAN Transition Finance Guidance Version 2"](#) (ACMF, 2024)

"corporate-level transition finance." In October 2024, the City of London Corporation, commissioned by the UK government, published a market review on transition finance. The review includes the presentation of a credible classification system for transition finance, and the recommendations for the development of sector-specific transition pathways.²⁶

(3) Positioning of these Basic Guidelines

The transition finance defined in the Basic Guidelines can potentially target all industries advancing efforts toward net-zero. It aligns with perspectives 2) and 3) in ICMA's definitions mentioned above. Considering that there are various forms of transition finance under different labels both domestically and internationally, the Basic Guidelines intend to be referenced in a wide range of initiatives including the transition label, consistent with the ICMA Handbook. Furthermore, in relation to "ASEAN Transition Finance Guidance Version 2," while focusing on the credibility of long-term transition strategies at the corporate level, these Guidelines also target "asset-level transition finance" in the case of Use-of-Proceeds finance (while focus on the credibility of long-term transition strategies at the corporate level is a prerequisite). Note that the Guidelines do not classify the activities or companies targeted, and the financing targeted is not limited to the four means classified by GFANZ. In this sense, these Guidelines cover a very wide range of transition finance.

In this context, the element emphasized in the Basic Guidelines is the formulation of transition strategies by companies. Additionally, as mentioned in Section 1 of Chapter 2, evaluating the credibility and effectiveness of transition strategies of companies belonging to various regions and sectors can be challenging for financiers. Therefore, in Japan, as mentioned in the previous chapter, sector-specific technology roadmaps indicating specific transition directions for ten high-emission sectors have been formulated. These roadmaps can assist fundraisers in formulating transition strategies consistent with the Paris Agreement, and aid financiers in evaluating the credibility and effectiveness of individual companies' transition strategies, as well as the transition eligibility of assets. Furthermore, the "Transition Finance Follow-up Guidance" has been formulated to address situations such as when ambitious initiatives do not progress as assumed in the roadmaps and scenarios, ensuring ambition and effectiveness.

In this sense, the Basic Guidelines and related initiatives ensure the credibility of transition finance by advancing the aforementioned ICMA report's initiatives—②transition planning and disclosure, ③sector-specific roadmaps, and ④benchmarking ambition—in an integrated manner.

²⁶ ["Scaling Transition Finance: Findings of the Transition Finance Market Review"](#) (City of London Corporation, 2024)

Column: Taxonomies and Roadmaps

One of the challenges surrounding transition finance for financial institutions is how to determine the eligibility of the transition strategies formulated by fundraisers.

There are two main approaches to this: taxonomies and roadmaps.

The approach of referencing taxonomies usually involves setting quantitative and/or measures/project-based criteria for what qualifies as a transition for each technology, making it easier for financial institutions to clearly determine eligibility, especially when evaluating transition at the asset level. However, since transition is inherently a concept over a spectrum, taxonomies may not easily allow for flexibility regarding relevant technology development and their schedule. Therefore, in the taxonomy approach, measures such as changing criteria over time or setting different criteria for regions with different circumstances are being taken.²⁷

The roadmap-based approach enables evaluations tailored to the specific circumstances of individual companies in that it evaluates transition eligibility within pathways, capturing relevant technology development and their schedule within gradations. Amidst future uncertainties, it is compatible with corporate transition strategies in the sense that it facilitates the presentation of projections that combine various technologies. On the other hand, there is a challenge in that a more in-depth assessment is required for each case to determine which technologies can be recognized as "transition-eligible" at any given time. Therefore, measures such as evaluation by external evaluation institutions or active engagement with fundraisers are being taken to verify validity.

The Japanese government has formulated sector-specific roadmaps in addition to the Basic Guidelines, considering these differences. This approach is based on the idea that the specific content and boundaries of transition vary depending on the industrial characteristics, regional characteristics, starting points, transition stages, and pathways of fundraisers, and that the content and level of necessary technologies will change through innovation, making it important to view "transition" as a "dynamic" concept. At the same time, this approach can be considered to be a more advanced method that requires fundraisers to provide detailed explanations and financiers to understand and evaluate them. In this regard, efforts such as the "Transition Finance Follow-up Guidance" for careful engagement are also being advanced alongside the roadmap initiatives. These government initiatives are compatible with financial institutions independently establishing their own taxonomy, and it is important to enhance the credibility of transition finance through various methods.

²⁷ In the EU, the EU Platform on Sustainable Finance, an expert group responsible for creating the sustainable finance framework for the European Commission, has published "[Categorisation of products under the SFDR: Proposal of the Platform on Sustainable Finance](#)" (2024) in preparation for the revision of the SFDR. It recommends the establishment of three categories: 'Sustainable,' 'Transition,' and 'ESG Collection,' while also outlining the 'minimum criteria' that products in each category must meet and the potential indicators to be used. The proposal advocates for the introduction of a new product classification framework that incorporates transition, and its future developments are attracting significant attention.

1. Overview of expected disclosure elements in transition finance

As mentioned above, the ICMA Handbook identifies the following four key elements in disclosure which are recommended to enhance credibility of the issuance of bonds to finance climate transition (“four key elements”):

- Element 1: Fundraiser's climate transition strategy and governance
- Element 2: Business model environmental materiality
- Element 3: Climate transition strategy and targets to be science-based
- Element 4: Implementation transparency



This chapter introduces issues regarding disclosure and shows approaches for each of the four elements. Such expectations and approaches are described using four expressions: “should”, “strongly recommended”, “recommended” and “be considered/possible”. These expressions are used in the following context.

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

However, while the ICMA Handbook assumes issuance in bonds, these Guidelines also target loans, and therefore, the entities utilizing these Guidelines are assumed to be broader than those in the ICMA Handbook. For example, when small-to-medium-sized enterprises conduct loan financing based on these Guidelines, the necessary elements for transition finance are common with the ICMA Handbook, but measures tailored to the characteristics of loans, such as simplifying certain disclosure requirements, may be considered.

These Guidelines are legally non-binding, and no legal penalties will be imposed even if a certain action does not comply with the expectations and approaches (including those described with the word “should”) provided in these Guidelines (however, it is necessary to note that if a certain act infringes upon any other relevant laws or regulations, legal penalties may be imposed based on those laws or regulations). Furthermore, if the disclosure required by these Guidelines falls under confidential matters in the business strategy of the company and there is a risk that such disclosure may negatively affect competitive conditions or is subject to confidentiality obligations, the Guidelines do not preclude them from being non-disclosed. Particularly, when structuring loans, if it is difficult to disclose information to the public from the standpoint of confidentiality and competition, it is possible to report such information only to lenders or external evaluation institutions without disclosing it to the public. As noted

in Chapter 2, transition finance shall be initiated in alignment with the existing principles and guidelines. Any restrictions already set forth for specific instruments, including matters concerning the issuance process that are not expressly described in these Guidelines, shall be applied in line with respective principles and guidelines.

2. Specific Approaches to Respective Disclosure Elements

(1) Element 1: Fundraiser's Climate Transition Strategy and Governance

○ Main issue

- a) Financing through transition finance shall aim to implement or incentivize the achievement of transition strategies²⁸. Such strategies should incorporate a long-term target to align with the goals of the Paris Agreement, which to “holding the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels,” relevant interim targets on the trajectory towards the long-term goal, disclosure on the levers towards decarbonization, and fundraiser’s strategic planning.
- b) A transition strategy shall serve to explicitly communicate the implementation of the fundraiser’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 Agreement²⁹. 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 technologies, improvements of/ changes in manufacturing processes and products, and development and provision of products and services in new fields.
- c) 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, the fundraiser shall also take into consideration the broader impact of business innovations to society and the environment other than climate change (including “just transition,” where appropriate.)
- d) Climate change-related scenarios³⁰ shall be referenced in developing transition strategies. The pathway to transition should be planned for respective sector and regions of individual fundraiser, who may generally be placed in a different starting point and pathway to transition.
- e) However, because such strategies and plans run for a long period of 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.
- f) In the initial phase of developing a transition strategy by the fundraiser, an option for the fundraiser is to indicate a plan for future implementation of items described with the words “recommended” and “be considered/possible” in these Guidelines.
- g) In order to secure the effectiveness of the transition strategy, the fundraiser shall establish governance that includes management/board level accountability,³¹ for the board of directors and/or other such committee to oversee the

28 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.

29 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”.

30 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](#).

31 Assumes matters provided for under “governance” in the [TCFD Recommendations](#) and the references can be made to IFRS S2 Climate-related Disclosures and the draft of SSBJ (Sustainability Standards Board of Japan) on climate-related disclosures.

activities addressing climate change and for management to play a role in assessing and managing such climate-related activities.

h) 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.

○ Disclosures

- i) Transition strategies and governance shall 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.
- j) It is possible to disclose transition strategies and elements concerning governance that ensures implementation in alignment with the reporting frameworks such as IFRS S2 Climate-related Disclosures, S2 Sustainability Disclosure Standards of Sustainability Standards Board of Japan (SSBJ), and the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD; Final Report)³².
- k) 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 approach³³ (including "just transition," where appropriate), etc. to address such impacts and disclose how the strategy on the whole contributes to achieving the Sustainable Development Goals (SDGs) so that the effects can be appropriately evaluated by the financier.
- l) *It is recommended that disclosures on an issuer's transition plan or climate transition strategy include specific itemization of the main levers towards GHG emissions reduction, such as detailed capital expenditure (CapEx) plan, and relevant technological implications (i.e., amounts to be spent, what carbon cost is considered for implementing such CapEx programme, operational impacts, regulatory considerations, etc.)*

*Key Points of the 2025 Revision: The above italicized text has been added based on the revision of ICMA Handbook.

- m) 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 shall be disclosed together with the underlying reason in a timely manner.
- n) 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.
- o) *It is recommended that the transition strategy interlinks with medium-term management plan and other management strategies and business plans, taking into account how investments in carbon-neutral technologies or low-carbon products and services, etc. and transformations in business models can lead to business benefits and enhance medium- to long-term returns.*

*Key Points of the 2025 Revision: The above italicized text has been added based on the Transition Plan Guidebook (TCFD Consortium, 2024).

32 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](#)". The references can be made to IFRS S2 Climate-related Disclosures and the draft of SSBJ (Sustainability Standards Board of Japan) on climate-related disclosures.

33 An example of the approach may be to identify, eliminate, reduce, and manage potential negative effects.

○Independent review, assurance, and verification

- p) 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.
- q) It is recognized to be useful to obtain a review, particularly concerning the following in connection with the transition strategy:
 - Alignment of short-term, mid-term and long-term targets (for targets, refer to Element 3) with the overall scenario
 - Credibility of the fundraiser's strategy to reach the targets
 - *In terms of scenarios, it is recommended to refer not only to international scenarios but also to more detailed regional and industry-specific scenarios. In this context, in Japan, sector-specific technology roadmaps are available for reference. For example, in Asia, pathways exemplified in ERIA's "Decarbonisation Pathway in ASEAN"³⁴ and the "ASEAN Transition Finance Guidance Version 2³⁵ - 4.2.2. Transition Pathway" can currently be referenced, but sector-specific and country-specific scenarios are expected to be further refined in the future.*

Level/type of independent governance and oversight of an issuer's climate transition strategy (e.g., by independent members of the board, dedicated board sub-committees with relevant expertise, or via the submission of an issuer's climate transition strategy to shareholders' approval).

*Key Points of the 2025 Revision: The above italicized text has been added based on the revision of ICMA Handbook.

(2) Element 2: Business Model Environmental Materiality

○Main issue

- a) Initiatives for achieving the transition strategy shall be such that contribute to transforming core business activities that are environmentally material parts today and in the future.³⁶
- 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 identification³⁷.
- c) In terms of considering materiality, it is possible to apply existing guidance provided by an organization that creates standard criteria concerning sustainability reporting³⁸.

○Disclosures

- d) The fundraiser shall indicate that climate change is an environmentally material part of business activities³⁹.
- e) 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 characteristics) for selecting such scenarios.
- f) *Disclosure of the discussion on the materiality of the planned climate transition strategy is as follows:*
 - *It is possible to disclose in the form of a materiality matrix made publicly available by an fundraiser or be covered in a fundraiser's annual reports.*

³⁴ [ASIA Zero Emission Center](#)(ERIA)

³⁵ ["ASEAN Transition Finance Guidance Version2"](#)(ACMF, 2024)

³⁶ They include activities that are environmentally material parts are considered to be business activities of the fundraiser that identifies climate change as part of its materiality.

³⁷ 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 2022](#)"(2023).

³⁸ ["The SASB Materiality Map"](#) issued by the Sustainability Accounting Standards Board serves as a guidance concerning materiality.

³⁹ 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.

- It is possible to address the materiality of climate-related eligible projects and/or KPI(s) on the overall emissions profile of a fundraiser.*
- Where material, Scope 3 emissions shall be disclosed. However, since Scope 3 emissions are primarily from sources outside the company, Scope 3 emissions may need to be estimated on a 'best-efforts' basis in the interim using information available without incurring without undue cost or effort at that time. When disclosing, it is strongly recommended to focus on most relevant Scope 3 sub-categories for financiers, understanding there are 15 categories, and also disclose boundaries and calculation methods. Where Scope 3 emissions are expected to be material but are not yet identified or measured, a timeline for reporting shall be disclosed in a manner consistent with discussions of ISSB. As a guideline for calculation, the "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain" (Ministry of Economy, Trade and Industry and Ministry of the Environment of Japan) can be referenced.*

**Key Points of the 2025 Revision: The above italicized text has been added based on the revision of ICMA Handbook.*

Column: Understanding of Scope 3 Emissions

For companies, actively engaging not only with their own operations but also with upstream suppliers and downstream consumers and end-users in the supply chain is crucial for advancing overall decarbonization efforts. Recognizing Scope 3 emissions figures holds significant importance in this context.

From this perspective, the TCFD recommendations stated in the Final Report in 2017 that Scope 3 emissions should be reported "where appropriate," but in the 2021 supplementary document, "Implementing the Recommendations of the TCFD," it was noted in a footnote that "The Task Force strongly encourages all organizations to disclose Scope 3 GHG emissions." In IFRS S2, Scope 3 emissions must be disclosed in the same way as Scope 1 and 2 "where the information is material" and "the entity shall use all reasonable and supportable information." In the European ESRS, disclosure of Scope 3 is required for significant categories. In this context, attention to Scope 3 emissions is increasing not only in the context of transition finance but also from the perspective of appropriate climate-related information disclosure.

However, since Scope 3 is highly dependent on external factors for fundraisers, IFRS S2 includes the caveat that "the entity shall use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort." Regarding the figures for Scope 3, its measurement requires various assumptions and has high uncertainty about future trends, it is difficult to evaluate the efforts of fundraisers simply based on the magnitude of the figures. Careful communication between fundraisers and financial institutions is necessary regarding how to calculate Scope 3 figures and how to interpret those figures.

(3) Element 3: Climate transition strategy and targets to be science-based

○ Main issue

- a) The fundraiser shall reference science-based targets in developing its transition strategies.
- b) This shall include mid-term targets (short- to mid-term targets) in addition to long-term targets for 2050 and be quantitatively measurable and comply with the latest available methodologies.
- c) In addition, it is *strongly recommended* that GHG reduction targets, which may be formulated either in intensity and absolute terms, 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. It is also possible to disclose the avoided emissions as necessary.

*Key Points of the 2025 Revision: Based on the revision of ICMA Handbook, the setting of Scope 3 targets has been changed from "recommended" to "strongly recommended."

- d) *From the perspective of visualizing the Green Transformation (GX) value of products and clarifying their contribution to overall societal emission reductions, it is possible to present avoided emissions of product (AEP) and reduced emissions of product (REP) or their targets, as necessary, in addition to the above Scope 1,2,3 targets.*

*Key Points of the 2025 Revision: "Public-Private Initiatives for Creation of a Market for GX" (Ministry of Economy, Trade and Industry, 2024)⁴⁰, the above italicized text has been added.

- e) Science-based targets are GHG reduction targets required for achieving the goals of the Paris Agreement and shall be set while taking into account differences in regional characteristics and industries. In so doing, it is possible to refer to the following trajectories⁴¹:

- Scenarios widely recognized in the international community⁴²
- Objectives verified under the Science Based Targets Initiative (SBTi) and such like
- Nationally Determined Contributions (NDC) of countries aligned with the goals of the Paris Agreement, roadmaps by industry sector⁴³, industries set out plans that are science-based achieving the Paris Agreement⁴⁴ and so on

When third-party trajectories are not available, industry peer comparison and/or internal methodologies/historical performance.

*Key Points of the 2025 Revision: The above italicized text has been added based on the revision of ICMA Handbook.

- f) Short- to mid-term targets (with a term of three to fifteen years) shall be set by referencing the aforesaid scenarios or on the pathway toward the long-term targets planned as benchmarks⁴⁵.
 - *For scenarios, it is recommended to refer not only to international scenarios but also to more detailed relevant regional or sector scenarios.*

*Key Points of the 2025 Revision: The above italicized text has been added based on the revision of ICMA Handbook.

40 ["Public-Private Initiatives for Creation of a Market for GX"](#) (Ministry of Economy, Trade and Industry, 2024) (in Japanese)

41 In 2022, ICMA published a Methodologies Registry, which provides a list of tools particularly useful for issuers to verify their own emission reduction trajectories, serving as a reference for issuers. Additionally, Annex 2 of ICMA Handbook includes "Non-exhaustive list of wider official and market guidance for climate transition themed GSS Bonds," which features various guidelines, including Japan's sector-specific roadmaps.

42 There are scenarios aligned with the Paris Agreement as defined by the IEA, and 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](#)" (2023).

43 An example of a sector-specific roadmap formulated by a public organization is that the Ministry of Economy, Trade and Industry of Japan has published roadmaps for high-emission industries, which include the iron and steel, chemical, electric power, gas, oil, pulp and paper, cement, and automobile. Additionally, the Ministry of Land, Infrastructure, Transport and Tourism of Japan has released "[Roadmap to Zero Emission from International Shipping](#)" and "[Aviation Sector/Procedure Chart for the Promotion of Decarbonization of Aviation](#)" (in Japanese).

44 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.

45 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.

- g) In doing so, since short- to mid-term targets will likely be set in consideration of various factors (including the transition stage and track records of the financier, timing of capital investments, economic rationality, social constraints, 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.

○Disclosures

- h) The fundraiser shall disclose the short- to mid-term and long-term targets they have set, including the base years and historic emissions (including absolute emissions, where intensity metrics are the main indicator) etc.
- i) *Where applicable, it is strongly recommended the fundraiser disclose use of carbon capture technology as well as of high-quality and high-integrity carbon credits⁴⁶, and their relative contribution to the GHG emissions reduction trajectory.*

*Key Points of the 2025 Revision: The above italicized text has been added based on the ICMA Handbook (2023).

- j) In order to show that long-term targets are science-based, disclosures shall explain the methodology or trajectory used to define targets, including the underlying reasons (e.g., characteristics specific to a region or industry). In particular, when reference is made to plans and industry roadmaps established by an industry, etc., the explanation should include that they are grounded on a scientific basis.
- k) 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.

○Independent review, assurance, and verification

- l) Concerning targets and trajectories, obtaining independent external reviews on the following is considered to be particularly useful. Additionally, it is also considered to be useful to include an independent external review of the relevant historical datapoints:
 - Whether the long-term target is aligned with science-based targets
 - ➔ Whether the disclosed information explains the alignment with the Paris Agreement
 - Whether the short- to mid-term targets are determined using a GHG emissions forecast calculated based on a climate change scenario analysis
 - ➔ Whether scenarios, etc. widely recognized in the international community are used or referenced
 - Whether the actual values of the indicators used for the targets are quantitatively measured using consistent measurement methods
 - ➔ Whether a specific GHG emissions reduction measure has been developed to achieve short- to mid-term targets aligned with long-term goals

46 The use of carbon credits for offsets in achieving GHG emission reduction strategies should be minimized and used only to address residual emissions. When using carbon credits, the fundraisers should disclose the rationale and necessity for their use, along with the internal policies related to the procurement and the associated governance of carbon credits. There are documents summarizing the use of carbon credits such as the "Carbon Offset Guidelines" by the Ministry of the Environment of Japan, and those by the Voluntary Carbon Markets Integrity Initiative (VCMI) and the Integrity Council for the Voluntary Carbon Market (ICVCM).

Column: Avoided Emissions of Product (AEP) and Reduced Emissions of Product (REP)

To incorporate climate change measures into business activities and promote corporate decarbonization investment, it is important to create a market where the results of emission reductions themselves are recognized as added value to the products and services provided by companies, making them preferable and to be traded at an appropriate price. To discuss this idea, the Ministry of Economy, Trade and Industry, Japan has established the "Study Group on GX Product Market for Creating Demand Contributing to Strengthening Industrial Competitiveness and Achieving Emission Reductions," and has organized the basic concept of making emission reductions the added value of products and services for the purpose of creating the GX market. In the interim summary, the concept of reduced emissions of product (REP) and avoided emissions of product (AEP) as indicators to visualize the GHG emission reduction amount per product unit created by corporate decarbonization investment was summarized.

The reduced emissions of product (REP) is an indicator that represents the GHG emission reduction amount per product unit within the company (Scopes 1 and 2), and it was proposed by the Ministry of Economy, Trade and Industry in the "Study Group on GX Product Market for Creating Demand Contributing to Strengthening Industrial Competitiveness and Achieving Emission Reductions" to visualize the GHG emission reduction efforts achieved in raw material manufacturing and assembly. Preferentially procuring products with large amount of REP is expected to stably increase demand, ensure investment predictability on the supply side, and actively promote the significance of these products, creating momentum for expanding demand for products containing value that contributes to GX. The avoided emissions of product (AEP) is an indicator that represents the extent to which products and services introduced into society contribute to the reduction of emissions throughout the entire life cycle, and it does not necessarily stop at the emission reduction amount in the manufacturing process. By utilizing these indicators, it is possible to promote the development and dissemination of products and services that contribute to decarbonization. This enables companies to enhance their values by engaging in the development of decarbonization technologies that contribute to society's emission reductions. In particular, regarding the avoided emissions of product (AEP), the WBCSD established a working group on avoided emissions in 2022 and compiled guidance in March 2023, and the GX League, a Japanese public-private initiative, organized the concept of avoided emissions of product (AEP) in "Basic Guidelines for Disclosure and Evaluation of Climate-related Opportunities" in March 2023. Furthermore, the concept of the avoided emissions of product (AEP) is mentioned in the G7 Leaders' Communiqué, and efforts are becoming more concrete, such as discussions on promoting the use of the avoided emissions of product (AEP) by financial institutions and the progress of international standardization in the electrical sector and electronic technology sector.

(4) Element 4: Implementation Transparency

○ Main issue

- a) In implementing transition strategies, the fundraiser shall provide transparency of the basic investment plan to the extent practicable.
- b) The investment plan includes not only capital expenditure (CapEx) but also capital and operational expenditure (OpEx) (including any internal cost of carbon). Therefore, costs related to research and development (R&D-related expenditures), 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.
- c) It is recommended that the investment plan outlines the assumed climate-related outcomes and impacts⁴⁷ in a quantitative fashion where possible, along with the calculation methods and prerequisites⁴⁸. If quantification is difficult, the use of external certification systems can be considered as a substitute for qualitative assessment.
- d) *When outlining the assumed climate-related outcomes and impacts, the fundraiser shall disclose not only GHG emission reduction and other initiatives to ease climate change but also, where relevant, outline how they have incorporated consideration of a "just transition" into their climate transition strategy.*

"Key Points of the 2025 Revision: Based on the revision of ICMA Handbook, the consideration for a "just transition" has been changed from "recommended" to "shall." It shall also be noted that a just transition needs to be promoted not only by the company but also in conjunction with national and local governments.

- e) If implementing the transition strategy has the potential of having a negative impact on employment or the environment and communities other than climate change, it is recommended that the fundraisers add any expenditures to mitigate such negative impacts to the investment plan.
- f) Moreover, the outcomes arising from investments included in the investment plan shall align with the targets.
- 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, 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.

⁴⁷ The Ministry of the Environment, in its "Concept Paper on Impact Finance" (2020), 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".

⁴⁸ As methods and metrics for demonstrating outcomes and impacts, one might consider referring to "[Handbook -Harmonised Framework for Impact Reporting](#)" (ICMA, 2024). Additionally, in disclosing impacts, outlining the amount of contribution to reducing CO2 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 "[Basic Guidelines for Disclosure and Evaluation of Climate-related Opportunities](#)" (GX League, 2023) and "[Guidance on Avoided Emissions](#)" (WBCSD, 2023) Furthermore, as for outcomes on research and development, it is possible to reference the IEA Measuring Innovation by Technology Readiness Level (TRL) or Relevance for Net-Zero Emission ("[ETP Clean Energy Technology Guide](#)"), among others, and outline the progress in the R&D phase or the potential of reducing CO2 emissions with the relevant technology by highlighting the importance of net-zero emissions.

○Disclosures

- h) It is recommended that investment plans be disclosed by linking the outcomes and impacts with the expenditure to the extent practicable⁴⁹.
- i) 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.
- j) *Annual disclosure of CapEx and OpEx plans (including the relevant assumptions on the carbon cost) and other relevant financial metrics to the extent that they relate to a climate transition strategy may be made in the fundraiser's annual report, sustainability report, climate strategy, statutory filings, use of proceeds framework, or bond allocation and impact report.*
- k) In cases where the Use-of-Proceeds bonds include refinancing, the fundraiser shall provide an explanation on the lookback period set under the framework or other relevant methods along with the underlying reasons and factors.

○Independent review, assurance, and verification

- i) *Specific assurance or verification of how CapEx and OpEx plans support an issuer's climate transition strategy is possible but may be challenging. If specific assurance or verification is not undertaken, an issuer shall provide forward-looking analysis of how the CapEx and OpEx plans are expected to support the GHG emission reduction strategy. Overall, several dimensions can be reviewed:*
 - the percentage/relative share of spending contributing transition strategies out of an issuer's total spending;
 - the absolute amount of green/sustainability spending; and/or
 - the GHG emission reduction outcomes or benefits achieved or expected to be achieved through such increased green/sustainability spending, and where available, the decreased non-green/significantly harmful spending.

*Key Points of the 2025 Revision: The above italicized text has been added based on the revision of ICMA Handbook.

49 In particular, disclosure of investment plans is expected to be required for projects applicable to Use of Proceeds.

In addition to the above, it is recommended to disclose the following items regarding the investment plan to the extent possible:

- 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 organization
- 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 science-based GHG emission reduction trajectories)
- Disclosure on the percentage of assets/revenues/ expenditures/divestments aligned to the various levers
- A qualitative and/or quantitative assessment of the potential locked-in GHG emission from an issuer's key assets and products
- Assumptions on the internal cost of carbon
- Disclosure on adverse impacts¹⁷ on the workforce, community and surrounding environment, and related strategies used to mitigate those negative impacts.

Appendix1. The Taskforce on Developing an Environment for Transition Finance (2024)

Chair

ITO Kunio
Director of Hitotsubashi CFO Education and Research Center

Taskforce members

AKIMOTO Keigo
Group Leader/Principal Research Scientist, Systems Analysis Group,
Research Institute of Innovative Technology for the Earth

II Sachie
Sustainability Chief Strategist, Sustainable Business Promotion Department,
Mizuho Financial Group, Inc

IKEDA Michiko
Director, Environment & Energy Policy Bureau, Keidanren (Japan Business Federation)

UENO Takahiro
Senior Researcher, R&D Manager (Sustainability), Socio-Economic Research Center,
Central Research Institute of Electric Power Industry

OKAZAKI Kenjiro
General Manager, Responsible Investment Dept, The Dai-ichi Life Insurance Company, Limited.

OSADA Wataru
Managing Director, Head of Sustainable Business Division, MUFG Bank, Ltd.

OSHIDA Shunsuke
Managing Director, Head of Credit Research, Japan,
Manulife Investment Management (Japan) Limited

KAJIWARA Atsuko
Managing Executive Officer, Head of the Group, Chief Sustainable Finance Analyst,
Sustainable Finance Evaluation Group, Japan Credit Rating Agency, Ltd.

KANEKO Tadahiro
Managing Director, Senior Assistant to Unit Heads of Global Banking & Wholesale,
Sumitomo Mitsui Banking Corporation

KANEDOME Masato
Principal, Sustainability Service Group Department
DNV Business Assurance Japan K.K.

KITAJIMA Kazuyuki
Director, Head of Fixed Income Management, Core Investment Department,
AXA Investment Managers Japan Ltd.

TAKAMURA Yukari
Professor, Institute for Future Initiatives, The University of Tokyo

TAKEGAHARA Keisuke
Professor, The National Graduate Institute for Policy Studies (GRIPS)

HAYASHI Reiko
Director and Deputy President, BofA Securities Japan Co., Ltd.,
Board Member, International Capital Markets Association (ICMA)

MIYAMOTO Yasutoshi
General Manager, Responsible Investment Strategy Office, Nippon Life Insurance Company

Observer

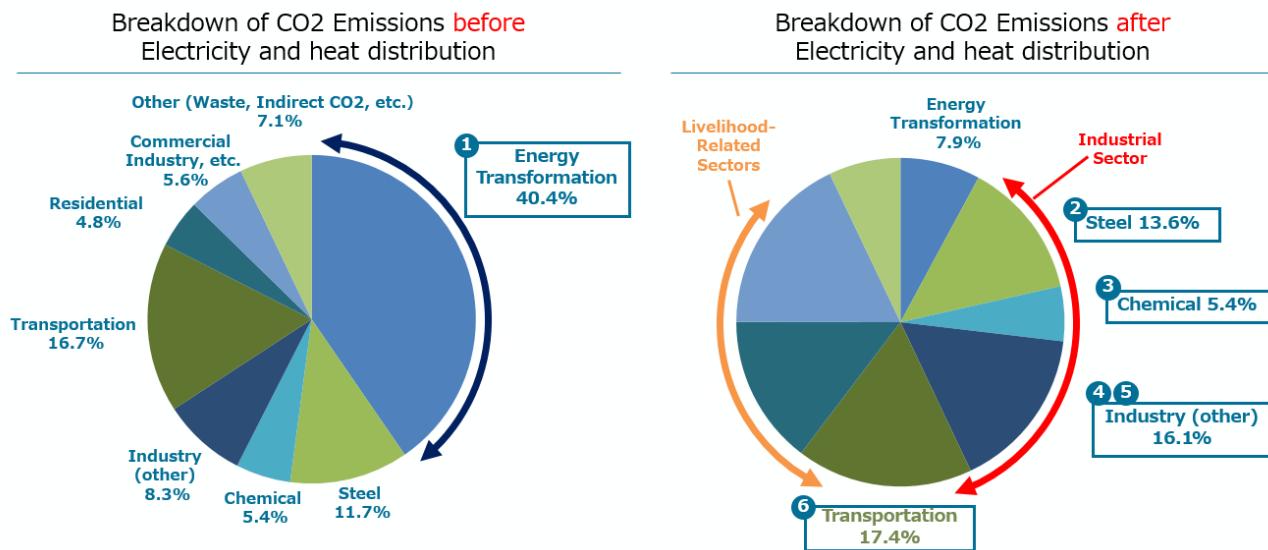
The Life Insurance Association of Japan
Japanese Bankers Association
JAPAN INVESTMENT ADVISERS ASSOCIATION
JAPAN EXCHANGE GROUP
United Nations Environment Programme Finance Initiative
Principles for Responsible Investment
Japan Securities Dealers Association
GX Acceleration Agency

Appendix2. Case Studies on Transition Finance

Japan has been proactively working on establishing a framework for transition finance, including the development of these Basic Guidelines and sector-specific roadmaps. Furthermore, since FY2021, Japan has implemented model projects and subsidy projects to support the accumulation of real cases that meet the requirements of these Basic Guidelines. To date, a total of 30 projects have been selected under these two initiatives. Among them, this document introduces six cases: (i) Kansai Electric Power, (ii) JFE Holdings, (iii) Sumitomo Chemical, (iv) Mitsubishi Materials, (v) Kirin Holdings, and (vi) Japan Airlines.

Details of each selected project, including links to third-party evaluations, are available on the METI website. For more information, please refer to the website.

[Reference] Relationship between Domestic Sectoral Emissions Breakdown and Case Studies Introduced



Energy Transformation: (i) Kansai Electric Power

Industrial Sector: (ii) JFE Holdings, (iii) Sumitomo Chemical, (iv) Mitsubishi Materials, (v) Kirin Holdings

Transportation: (vi) Japan Airlines

In addition, there are initiatives by financial institutions to independently establish standards and approaches related to transition finance.

Ministry of Economy, Trade and Industry (METI)

[Transition Finance – Model Projects / Subsidy Programs](#)

**Includes project summaries and links to third-party evaluations*

SMBC

[Transition Finance Playbook 2.0 \(2024\)](#)

Nippon Life

[Transition Finance Framework \(2024\)](#)

Case Study 1 | Kansai Electric Power Company, Incorporated

■Corporate Profile

Industry	Electricity business, gas business, etc.
Location	Japan
Business	As a former general electricity utility, KEPCO's main supply areas are the six prefectures of the Kinki region. As of fiscal year 2022, it had 167 power plants with an output of 28.6million kWh, centered on thermal, nuclear and hydroelectric power.

■ Bond Outline

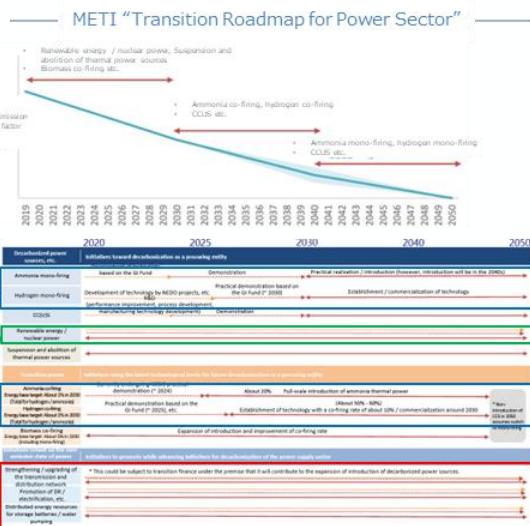
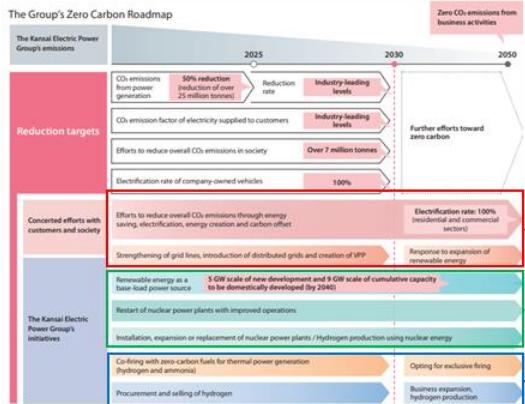
Issue Date	July 2024
Type of Financing	Transition Bond
Issue Amount	45 Billion Yen
Structuring Agency	SMBC Nikko Securities Inc.
Evaluation Agency	Japan Credit Rating Agency, Ltd.

■ Alignment with the Four Elements

Element 1	<ul style="list-style-type: none"> KEPCO formulated a "Zero Carbon Roadmap" and rolled out initiatives centered on making renewable energy a core power source, maximizing the use of nuclear power, promoting zero-carbon thermal power and building a hydrogen supply chain as specific initiatives for the reduction of emissions. The company established a Sustainability Promotion Committee to discuss the group's policies and initiatives related to climate change and confirm progress. In addition, KEPCO established a Zero Carbon Committee as a meeting specializing in decarbonization. The president serves as the chair of the committee, which shares the initiatives of each division related to zero carbon and confirms progress. The Office of Energy and Environmental Planning is responsible for the secretariat.
Element 2	<ul style="list-style-type: none"> KEPCO specified its materiality in combination with the formulation of its medium-term management plan (2021 to 2025). It raises the "promotion of initiatives for zero carbon" as a part of its materiality.
Element 3	<ul style="list-style-type: none"> The target of a reduction in CO₂ of at least 50% in fiscal year 2025 compared to fiscal year 2013* in the Zero Carbon Roadmap 2050 is consistent with the path to the 1.5°C target for each sector in the IPCC's Sixth Assessment Report (AR6). (*the target was updated to a reduction of 55% in Scope 1&2 in April 2024) The promotion of electrification and initiatives related to renewable energy, nuclear power and hydrogen are consistent with the Ministry of Economy, Trade and Industry's Technology Roadmap for Transition Finance in the Power Sector.
Element 4	<ul style="list-style-type: none"> In its medium-term management plan, the company announced a plan to invest 1.05 trillion yen over five years from fiscal year 2021 to fiscal year 2025 to take on the challenge of zero carbon (EX: Energy Transformation). It was also announced that of this, the company plans to invest 340 billion yen in renewable energy projects such as new development centered on offshore wind and the refreshment of existing hydropower. In fiscal year 2023, the company planned to invest 215 billion yen in initiatives for the safe and stable operation of nuclear power, the promotion of renewable energy such as offshore wind and solar power generation.

■ Transition Strategy

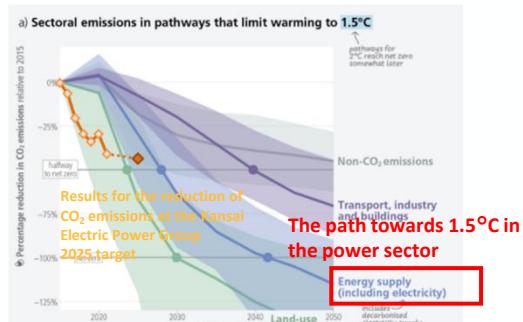
KEPCO Zero Carbon Roadmap



Initiatives Consistent with METI's Roadmap for the Power Sector

- Strengthening and upgrading of the transmission and distribution network
- Promotion of electrification
- Expansion of the application of distributed energy
- Make renewable energy a major power source
- Upgrading of nuclear power operations, new addition, etc.
- Expansion of the use of hydrogen and ammonia fuel

Comparison of the IPCC AR6 and KEPCO's Reduction Target



Key Points

- Initiatives for the promotion of electrification, in transmission and distribution business, to make renewable energy a major power source, utilization of nuclear power, to make thermal power zero carbon (hydrogen and ammonia co-firing) and to build a hydrogen supply chain are consistent with the Ministry of Economy, Trade and Industry's Technology Roadmap for Transition Finance in the Power Sector.
- The target of a reduction in CO₂ of at least 50% in fiscal year 2025 compared to fiscal year 2013* in Zero Carbon Roadmap 2050 is consistent with the path to the 1.5°C target for each sector in the IPCC's Sixth Assessment Report (AR6). (* the target was updated to a reduction of 55% in Scope 1&2 in April 2024)

Case Study 2 | JFE Holdings, Inc.

■Corporate Profile

Industry	Steel industry
Location	Japan
Business	JFE Holdings, Inc. is one of the largest steel companies in Japan. It is a holding company with the wholly owned subsidiaries JFE Steel, JFE Engineering and JFE Shoji. Centered on steel business, it also carries out engineering business and trading company business.

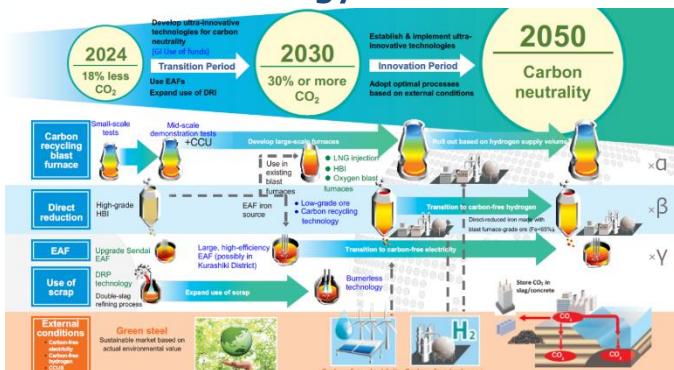
■Bond Outline

Issue Date	July 2024
Type of Financing	Transition Bond
Issue Amount	15 Billion Yen
Structuring Agency	Nomura Securities Co., Ltd.
Evaluation Agency	Japan Credit Rating Agency, Ltd.

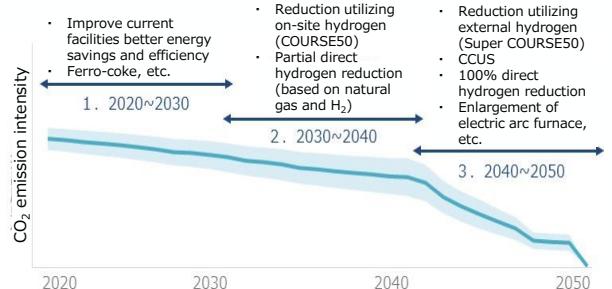
■Alignment with the Four Elements

Element 1	Under the JFE Group Environmental Vision for 2050, JFE Holdings, Inc. will aim for the realization of carbon neutrality in 2050. As interim targets, the company aims for a reduction of 18% in its core steel business in FY2024 and a reduction of at least 30% in FY2030 (compared to 2013, both Scope 1 and 2). Further, in engineering business too, the company has raised the expansion of CO ₂ avoided emissions (at least 25 million tons in FY2030). As for governance, the group discusses group-wide targets and policies related to climate change and confirms the progress of results on the Group Sustainability Council and the various committees it participates in.
Element 2	In the process of identifying important management issues identified in 2021, JFE Holdings, Inc. identified the reduction of the CO ₂ emissions of the JFE Group and contributing to CO ₂ reductions by society as a whole as two of its most important material issues.
Element 3	The roadmap for the conversion of steel manufacturing processes in the JFE group is consistent with the Ministry of Economy, Trade and Industry's Technology Roadmap for Transition Finance in Iron and Steel Sector.
Element 4	In its Seventh Medium-term Business Plan, JFE Holdings, Inc. disclosed a plan to invest at least 340 billion yen in line with its transition strategy over the four-year period from FY2021 to FY2024. As an initiative for FY2030, the company announced that capital expenditure on the scale of 1,000 billion yen will be required to realize its target of reducing CO ₂ emissions by at 30% or more

■Transition Strategy



Pathway of METI's iron and steel roadmap



Toward FY2024 -18% reduction

■ Facility investment
Completion of approval of cumulative CO₂ reduction of 90% of the investment plan for the CO₂ reduction target* through energy savings and technological development
-> Cumulative investment plan: 88% approved

■ Emissions reduction
Achievement of 50% of the CO₂ reduction target * through energy saving and technological development
-> CO₂ reduction target: Achievement of 58%

*Reduction in CO₂ emissions through energy saving and technological development: 1 million tons

Toward FY2030 -30% or more reduction

■ Energy saving and greater efficiency
Updated to Fukuyama high efficiency coke oven (-16)
Improvement of the efficiency of power demand facilities
Leverage AI and DS technologies
Expansion of the use of scrap in converters (-150)
Use of reduced iron in blast furnaces and converters (-200)
■ Use of low-carbon raw fuel
■ Use of electric furnaces
Sendai: Upgrade EAF (-10)
Chiba: Introduce EAF for SUS (-45)
Kurashiki: Innovative EAF (high-efficiency and large) (-260)

Approved projects are shown in blue bold. Values in parentheses are reduction amounts (10,000 tons / year)

Initiatives consistent with the iron and steel roadmap

- High efficiency through process development in blast furnaces, etc.
- Higher quality and larger electric furnaces
- Development of technology for hydrogen ironmaking (direct reduction)

Key Points

- JFE Holdings, Inc. will implement initiatives for the reduction of CO₂ emissions in steel business, and the expansion and development of renewable energy power generation, etc. for the realization of emissions reductions.
- In steel business, the company will promote the conversion to low carbon manufacturing processes, considering the period to FY2030 to be a transition period. The company defines the period from FY2030 to 2050 as an innovation period, during which it will establish and implement super-innovative technologies.
- It is also highly transparent, disclosing initiatives up to the end of FY2024 and FY2030

Case Study 3 | Sumitomo Chemical Company, Limited

■Corporate Profile

Industry	Chemical
Location	Japan
Business	A major general chemical company. Approximately 70% of sales come from overseas. Investments have been made in agrochemicals and ICT-related fields, while promoting structural reforms in petrochemicals and pharmaceuticals.

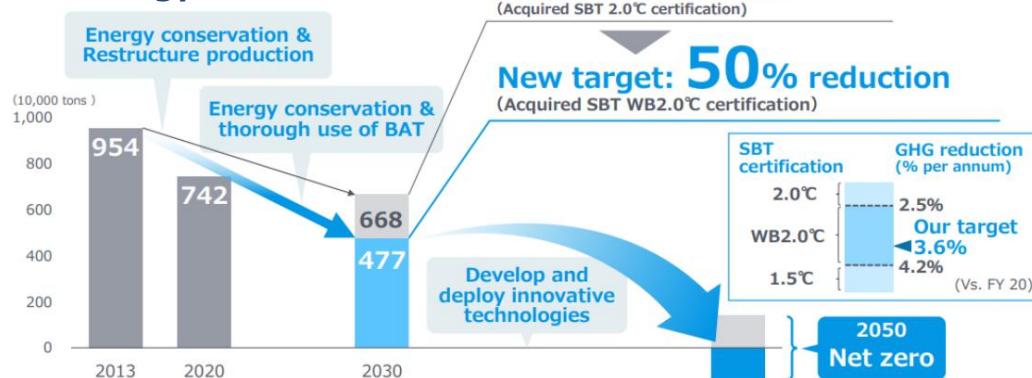
■Loan Outline

Planned Issue Date	From March 2022
Type of Financing	Transition Loan
Borrowers and amount	<ul style="list-style-type: none"> Sumitomo Joint Electric Power Co., Ltd. : 8 Billion Yen Sumitomo Chemical Company, Ltd. : 10 Billion Yen
Evaluation Agency	<ul style="list-style-type: none"> Japan Credit Rating Agency, Ltd. DNV Business Assurance Japan K.K.

■Alignment with the Four Elements

Element 1	The company has established concrete measures to achieve the ambitious target of 50% reduction by 2030 and net zero by 2050. It is also striving for rapid social implementation of products and technology that contribute to global GHG reduction. For the governance, an organization to promote carbon neutrality led by Board of Directors has been established.
Element 2	Mitigation of climate change is listed first among contributions to reducing environmental impact as a material issue concerned with social value creation
Element 3	Medium- and long-term targets have been set for Scopes 1, 2 and 3. The interim target for FY2030 and long-term target of net zero including Scopes 3 has obtained SBTi certification. Targets are also in alignment with the Ministry of Economy, Trade and Industry's Technology Roadmap for "Transition Finance" in the Chemical Sector.
Element 4	The company has formulated an investment plan based on internal carbon pricing, and expects to invest a total of 200 billion yen, with 80 billion yen by FY2021 and 120 billion yen by FY2030

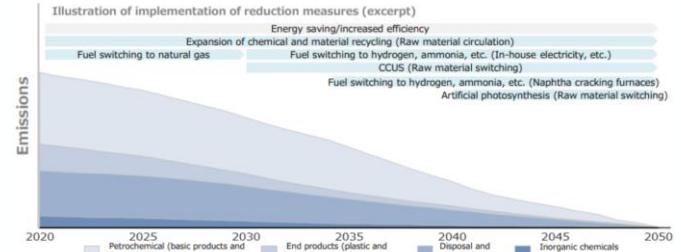
■Transition Strategy



■Candidate for Use of Proceeds

Fuel before conversion	Ehime district Oil and heavy oil	Chiba district Petroleum coke
Fuel after conversion	Natural gas and byproduct gas (Hydrogen) 650,000 tons/year	Natural gas 240,000 tons/year
CO ₂ emissions reduction		

METI's Technology Roadmap for "Transition Finance" in the Chemical Sector



Key Points

- The company has set a net-zero target for 2050 and, toward its realization, has formulated specific strategies, established interim targets (Scope1-3), developed organizational structures, and prepared investment plans.
- These targets and the strategy are in alignment with the chemical sector roadmap. It has also obtained SBTi certification for the targets, as a level well below 2°C.
- The allocated funds will be used for LNG-fired power generation facilities, which are positioned as one of the key measures for achieving the 2030 targets. Future use of hydrogen and other technologies is also being considered, aligning with the transition strategy toward 2050 net zero.
- In addition to governance systems including oversight by the Board of Directors, a specialized organizational structure for promoting carbon neutrality has been established to ensure the effectiveness of these strategies.

Case Study 4 | Mitsubishi Materials Corporation

■Corporate Profile

Industry	Non-ferrous metals
Location	Japan
Business	Manufactures and sells processed copper products and electronic materials, carbide products, and conducts the smelting and sale of metals such as copper, gold, silver and palladium, renewable energy business and so on.

■Bond Outline

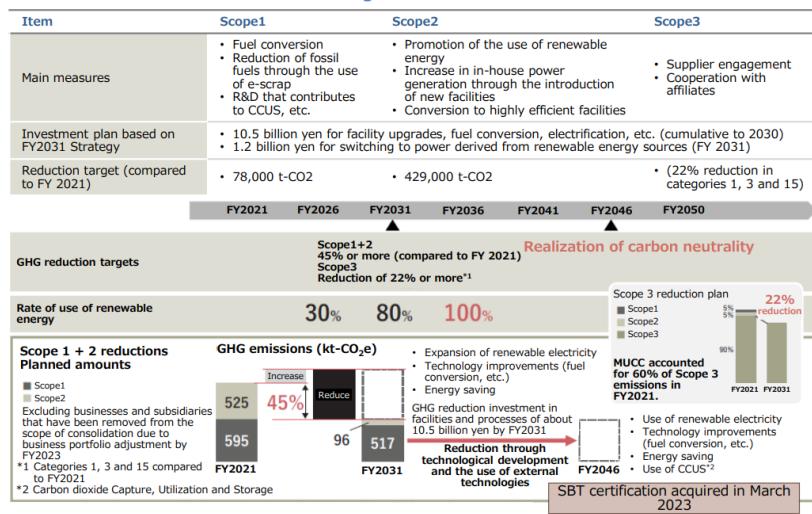
Issue date	February 2024
Type of Financing	Transition Linked Loan
Issue Amount	20 Billion Yen
Structuring Agency	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
Evaluation Agency	Japan Credit Rating Agency, Ltd.

■Alignment with the Four Elements

Element 1	With regard to "decarbonized society," part of the company's mission, "Create a sustainable future (a prosperous, recycling-oriented, decarbonized society)", the company has set FY 2046 as its target year for carbon neutrality, several years ahead of the national target year of FY 2050. As for governance, matters considered by a specialist department (Global Environment Office) are reported to the Board of Directors
Element 2	Materiality is arranged based on two axes: their importance to stakeholders and their importance in light of the group's "vision." The company identified "the creation of a recycling-oriented society," "contributions to the global environment," "sustainable supply chain management," and "respect for human rights" as its key materialities.
Element 3	For its GHG reduction targets, the company obtained SBT certification from SBTi (Scope 1 + 2 at 1.5 degrees Celsius level).Based on the IEA's net zero scenario (NZE), published policy scenario (STEPS), etc., the impact on business, finance and strategy has been analyzed under the 1.5 degrees Celsius and 4 degrees Celsius scenarios, and targets are set accordingly.
Element 4	Under its FY2031 Strategy, the company plans to invest 250 billion yen to expand resource recycling, 180 billion yen to strengthen the supply of high-performance materials and products, and 30 billion yen in renewable energy from FY2024 to FY 2031

■Transition Strategy

Strategies for Transition



Initiatives for the stable supply of metal resources

Mitsubishi Materials is also working on securing e-scrap as well as natural resources to secure the metal resources required for carbon neutrality.

- The company continues to invest in overseas copper mines for stable procurement of clean copper concentrates. The company has set the target of increasing the amount of secured copper concentrates from the current 150,000 tons to **at least 500,000 tons** in FY 2031.
- The company observes CSR procurement standards, etc., in the procurement of raw materials for copper products.
- The company claims correction to the mining companies it buys from (if necessary).

natural resources

- The company aims to be a core supplier in the resource recycling loop.
- Aims to build a **system with 240,000 tons capacity** for e-scrap processing by FY 2031.
- Will construct a global e-scrap collection network.
- The company will realize the expansion of its e-scrap business in the United States first, then expand on a global scale including Asia and Europe.

resource recycling

Key Points

- The company has set FY 2046 as its target year for Scope 1+2 carbon neutrality, several years ahead of the national target year of FY 2050.
- Reductions in emissions are expected by fuel conversion, the use of CCUS, switching to renewable energy, etc.
- In addition, the company will strengthen efforts on resource recycling as an initiative that contributes to carbon neutrality. For the copper and other non-ferrous metals markets, where demand is expected to increase from now on, the company will not only expand production using natural resources but also will promote the use of recycled materials.
- Mainly the "net zero scenario (NZE)" of the International Energy Agency (IEA) and the "published policy scenario (STEPS)" reflecting the current policy settings are used to analyze the impacts on business, finance and strategy under the 1.5 degrees Celsius and 4 degrees Celsius scenarios.

Case Study 5 | Kirin Holdings Company, Limited

■Corporate Profile

Industry	Foods
Location	Japan
Business	Developed into the health science and pharmaceuticals domain by utilizing fermentation and biotechnology cultivated through on the food and beverages business. The food and beverages business has expanded its operation area into overseas markets, mainly in Asia and Oceania

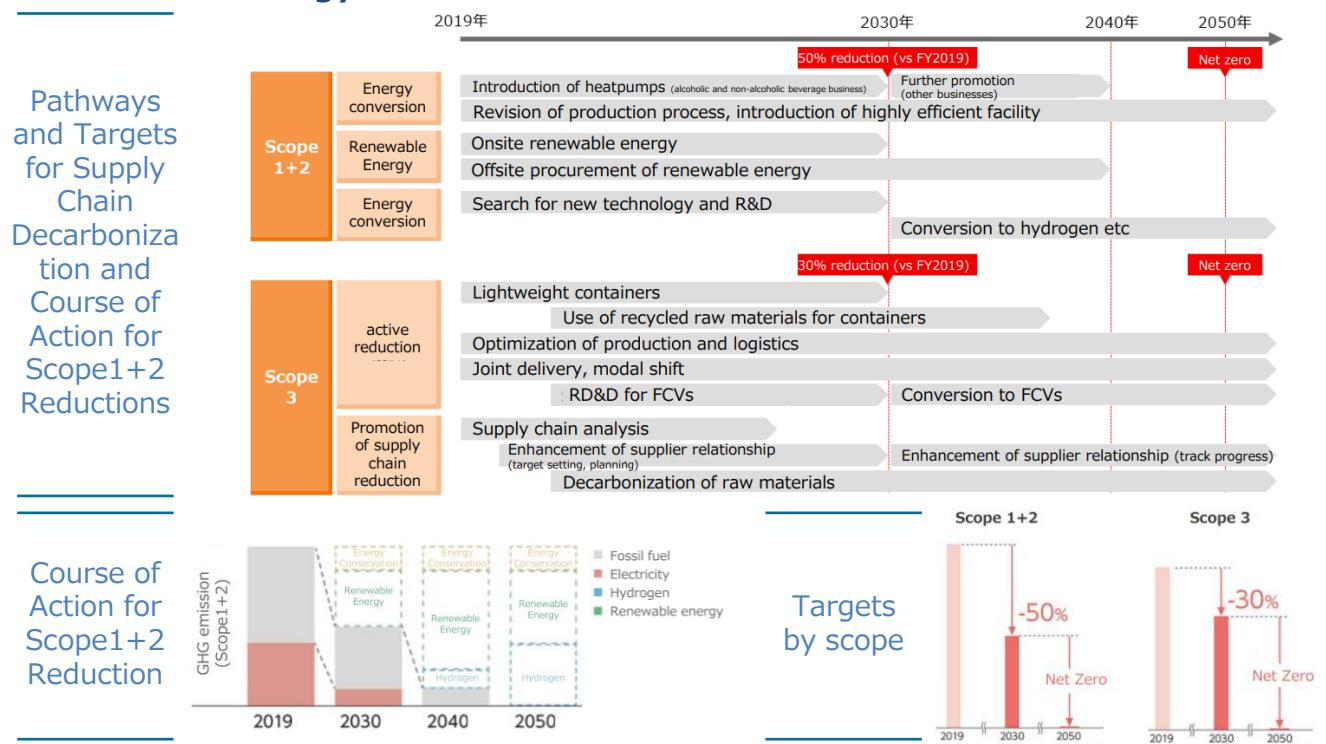
■Loan Outline

Issue date	January 2023
Type of Financing	Transition-Linked Loan
Issue Amount	50 Billion Yen
Evaluation Agency	DNV Business Assurance Japan K.K.

■Alignment with the Four Elements

Element 1	Separately developed decarbonization strategies and pathways of Scope 1+2 and Scope 3 stepwise decarbonization, considering the diversity of emission sources, operators and sites. For the governance, the Group CSV Committee is held 3 times a year, which consists of Holdings executives and subsidiary presidents.
Element 2	Sets KPIs/SPTs based on CSV commitment for mid- and long- term environmental action plans. These plans are detailed in Kirin Group Vision 2027 as one of the Four key CSV issues (Health, Community, Environment and Responsibility)
Element 3	Sets decarbonization target in their overall corporate strategy including Scope 3 and is qualified for SBTi Net Zero Standard for the first time in the food sector.
Element 4	400 billion yen has been planned for capital investment (Infrastructure Investments and Growth Investments) in their Medium-Term Business Plan (FY2022-2024). 10 billion yen is allocated for environment (allocation of this loan) within the 220 billion yen Infrastructure Investments.

■Transition Strategy



Key Points

- Stepwise decarbonization based on business characteristics is important to achieve the entire supply chain decarbonization, which is relevant to various stakeholders.
- Targets and pathways for supply chain decarbonization covers all Scopes.
- In July 2022, Scope 1+2 and 3 has been certified for SBTi Net Zero Standard (1.5 degrees) for the first time in food and beverage industry.
- Expected to contribute to the stimulation of market-wide transition, and its "transition finance" label meets the market expectations, with a clear decarbonization strategy, plan, and targets.
- This bond is focused on Scope 1+2 which is a prioritized area, and is an initiative based on the company-wide decarbonization strategy. SPT is also aligned with the SBT-certified goals

Case Study 6 | Japan Airlines Co., Ltd.

■Corporate Profile

Industry	Aviation
Location	Japan
Business	Japan Airlines Co., Ltd. operates international and domestic passenger services, cargo and mail services, and other businesses.

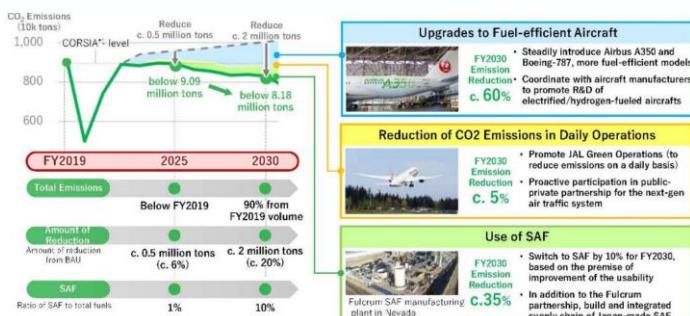
■ Bond Outline

Issue date	March 2022
Type of Financing	Transition Bond
Issue Amount	10 Billion Yen
Structuring Agency	<ul style="list-style-type: none"> Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. Daiwa Securities Co. Ltd.
Evaluation Agency	Sustainalytics

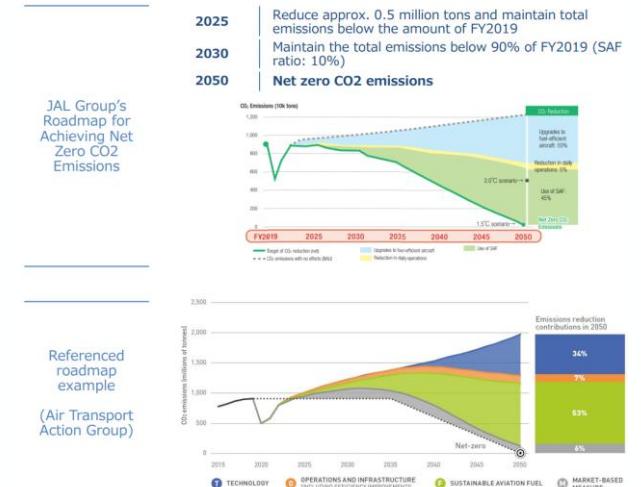
■ Alignment with the Four Elements

Element 1	Transition strategy: JAL has a transition strategy to achieve net zero CO2 emissions by FY2050, and plans to upgrade to fuel-efficient aircraft, use SAF, and innovate operations to achieve the target. Governance: The Board of Directors oversees and directs the transition strategy.
Element 2	Transition strategy and targets are clearly related to the environmental materiality in JAL's business model.
Element 3	Long-term targets refer to ATAG's Waypoint 2050, etc., which is considered to be a scenario consistent with the Paris Agreement. Since the short- and medium-term targets are below the ambitious scenario presented by the TPI benchmark, further emission intensity reductions are recommended.
Element 4	Investment plans for FY2021 to FY2025 have been disclosed in the Medium Term Management Plan. The total amount and share of transition strategy investment as a percentage of total company wide investment will be disclosed.

■ Transition Strategy



Roadmap at the time of Transition Bond issuance
*it may be changed in the future



Key Points

- The transition strategy for achieving carbon neutrality in 2050 is aligned with ICAO and the Ministry of Land, Infrastructure, Transport and Tourism's Roadmap to Decarbonization of Aviation.
- The long-term target is ambitious. In addition, although the medium-term targets are somewhat inferior to the benchmarks referred to in the 3rd party evaluation, the overall level is comparable to the current international scenarios of ICAO, ATAG, IEA, and others.
- While the introduction of SAF will be critical to achieving the medium- and long-term targets, a concrete and ambitious target of 10% in FY2030 has been set.
- SAF can also be used for the funded aircraft, which is consistent with the transition strategy. Moreover, the impact of use of proceeds on achievement of the interim targets is shown.
- An example of the effective use of transition bonds in a high-emission industry where decarbonization technologies are not yet established.

Financial Institution's Approach | SMBC

■Corporate Profile

Company name	Sumitomo Mitsui Banking Corporation
Industry	Financial institution (Bank)
Location	Japan

■Framework Outline

Publication	Original : May 2023 Ver.2.0 : May 2024
Title	Transition Finance Playbook
About	Organize criteria and standards for determining transition eligibility
Evaluation Agency	DNV Business Assurance Japan K.K.

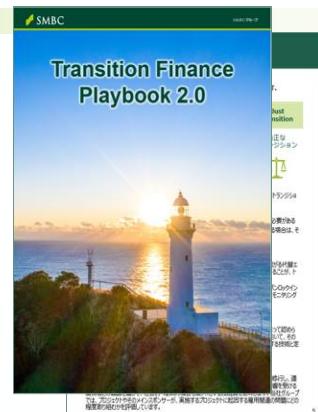
■Framework

Transition Finance	Our definition	Financial services aiming to support clients align their operations with pathways in line with the objectives of the Paris Agreement.				
	Principles	Do No Significant Harm	No carbon lock-in	Best available technology	Just transition	
Objectives of the Playbook		<ul style="list-style-type: none"> ① Develop objective criteria to define Transition Finance ② Ensure accountability towards stakeholders ③ Leverage the Playbook for customer engagement 				
Assessment approach						
Financing Assets	<ul style="list-style-type: none"> Assets are assessed based on SMBC's Internal Taxonomy The Internal Taxonomy has been developed according to best practice, regional differences and pathways and technological information. To the extent possible, it takes into account alignment with national transition plans / pathways. 					
Transition Strategies	<ul style="list-style-type: none"> Commitment for net zero by 2050 and alignment with the Paris Agreement Disclosure and reduction targets for GHG emissions Concrete transition strategies to achieve the targets 					

Eligibility assessment approaches

SMBC Group's approach to assess transition finance differs between Project Finance, General Corporate Purpose, and Use of Proceeds.

Finance Type	Assessment on
Project Finance	① Financing assets + ② Transition strategies
Use of Proceeds	
General Corporate Purpose	② Transition strategies



Point

- The Transition Finance Playbook was published in 2023 to outline SMBC Group's expectations and detailed evaluation methods for customers' transition strategies.
- When identifying assets that contribute to transition finance, the situation in each region is taken into consideration.
- In evaluating customers' transition strategies, we verify factors such as their commitment to achieving net-zero by 2050, the status of GHG emissions disclosure, and the presence of reduction targets.

Financial Institution's Approach | Nippon Life

■ Corporate Profile

Company Name	Nippon Life Insurance Company
Industry	Financial institution (Life Insurance)
Location	Japan

■ Framework Outline

Publication	June 2024
Title	Transition Finance Framework
About	Clarifies criteria to determine the transition eligibility

■ Framework

Transition Finance Evaluation Process

Corporate Level Evaluation

- Evaluate the alignment with the Paris Pathway (Short-, Mid-, Long-term)
- Evaluate the credibility of transition strategy and investment plan

No

Asset Level Evaluation

- Evaluate the alignment with the Paris Pathway for individual assets

No

Not Aligned with Pathway

Not transition eligible

Yes

Aligned with Pathway

Transition eligible (Provide Use-of-Proceeds investments and loans)

Aligned with Pathway

Aligned with Pathway

Transition eligible (Provide investments and loans regardless of Use-of-Proceeds)

Principles of our Approach to Transition Finance

① Alignment with the Paris Pathway

② Technological Neutrality

③ Monitoring and Dialogue

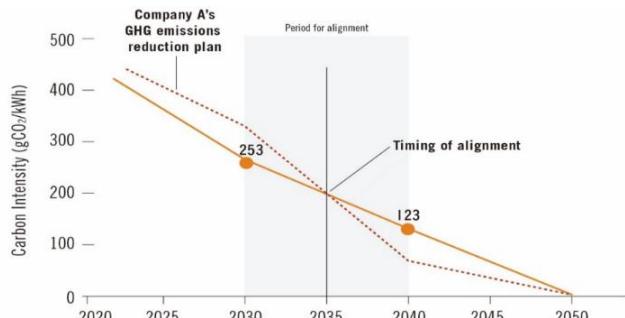
④ Do No Significant Harm (DNSH)

⑤ Just Transition

[Image] Evaluation of Alignment with the Paris Pathway (Corporate Level Evaluation)

For each sector (electricity and steel sectors for now), we set GHG emission intensity criteria for 2050 (the Paris Pathway) and evaluate whether a company's reduction plan meets these criteria. **Even if the plan exceeds the criteria during a specific term, if the cumulative GHG emission of the plan is less than that of the criteria, we determine it to be aligned with the Paris Pathway.**

- Examples Determined to be Aligned with the Paris Pathway -



Cumulative GHG emission of Company A's Pathway is below the cumulative GHG emission of the criteria

Point

- In June 2024, **Nippon Life** developed its "**Transition Finance Framework**," which provides evaluation criteria for investee companies, to promote transition finance.
- It covers their **evaluation process and criteria for determining transition eligibility by first evaluating the corporate level, and even if it is found to be "Not Aligned" at that level, then determining the eligibility with evaluation at the asset level.** By defining appropriate transition finance with concrete evaluation methods and criteria, rather than at a conceptual level, the company strives to serve as a guideline for companies in formulating and implementing decarbonization strategies, thereby **accelerating efforts to decarbonize the real economy.**

*It has received positive and welcoming comments from Sean Kidney, CEO of Climate Bonds Initiative