



SECOND PARTY OPINION

SUMITOMO CHEMICAL COMPANY LIMITED TRANSITION LOAN FRAMEWORK

Prepared by: DNV Business Assurance Japan K.K.

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This report was prepared in the "Climate Transition Finance Model Project in FY2021 (Investigation of ideal way of Transition Finance)" which is a commissioned project by the Ministry of Economy, Trade and Industry.





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Revision history

Revision Number	Issue Date	Remarks
0	03 Feb 2022	Initial

Disclaimer

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

Statement of Competence and Independence

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

 $^{^{1}}$ DNV Code of Conduct is available from DNV website (www.DNV.com)



Executive Summary

DNV Business Assurance Japan K.K. (hereinafter, "DNV") has been commissioned by Sumitomo Chemical Co., Ltd. (hereinafter, "Sumitomo Chemical," the "fundraiser") to evaluate the eligibility of the "Sumitomo Chemical Group Transition Loan Framework (hereinafter, "framework") "and the eligibility of the transition loans (Use of Proceeds bond) to be implemented based on the framework conform with the Climate Transition Finance Handbook (CTFH), the Basic Guidelines on Climate Transition Finance (CTFBG), the Green Loan Principles (GLP), and the Green Loan Guidelines (GLGLs). The following is a summary of the assessment results of each four elements indicated in CTFH and GLP.

< Climate Transition Finance Assessment results>

Element 1: Issuer (Fundraiser)'s climate transition strategy and governance

The purpose of Sumitomo Chemical's transition financing (transition loan) is to implement the company's carbon neutral (transition) strategy for the year 2050. This transition strategy is consistent with the Japanese government's 2050 Carbon Neutral Goal, the "Technology Roadmap for the Chemical Sector" based on a science-based concept aligned with the Paris Agreement, and the transition pathway of the internationally recognized Science Based Targets (SBT). Also, it contributes to the company's business transformation.

Element 2: Business model environmental materiality

The transition pathway of Sumitomo Chemical's plan relates to the materiality that management needs to address in terms of the environment, particularly in response to climate change. In formulating the transition strategy and investment plan, several internationally recognized future scenarios are utilized from their potential to influence decisions on materiality.

Element 3: Climate transition strategy to be science-based including targets and pathways

Sumitomo Chemical's Transition Strategy is based on science-based targets and pathways for transition. Using the internationally widely recognized SBT as a benchmark and considering society needs, Sumitomo Chemical is updating their long-term targets for GHG emission reductions and medium-term targets for the pathway to a high level.

Element 4: Implementation transparency

In pursuing its transition strategy, Sumitomo Chemical will communicate its investment plans appropriately directly with the lenders of the transition loans or through the loan arrangers if the loans are structured in syndication to ensure transparency possible. Since the individual results of each investment target are aligned with the overall goal, Sumitomo Chemical believes that the comprehensive GHG emission reduction of the entire group will be the outcome of the transition loan and will lead to the impact of achieving carbon neutrality. In terms of negative impacts, the environmental aspects of the project are



compliance with national environmental laws, and the social aspects of the project are the employment situation due to project promotion.

< Green Loan Principles Assessment results>

Principle 1: Use of Proceeds

The framework defines the use of proceeds as practically "projects for the construction of LNG-fired power generation facilities," these types of projects are consistent with the toward transition. The funds raised through this transition loan are appropriately planned to be allocated to the specified projects, including refinancing. Projects that are eligible for the use of proceeds are expected to generate a clear environmental impact in the form of reduced GHG emissions, such as fuel conversion to LNG and the introduction of an energy-efficient power generation system.

Principle 2: Process for Project Evaluation and Selection

Eligible projects are aligned with the fundraiser's corporate philosophy, materiality, carbonneutral strategy, and investment plan, and GHG emission reduction targets. In the evaluation and selection of projects, a process has been established whereby multiple departments involved in the fundraiser's project selection process are consulted before a decision is made by management. These processes are consistent with GLP.

Principle 3: Management of Proceeds

The fundraiser plans to allocate the proceeds to new investments or refinancing of projects that are considered eligible in a timely manner after the fundraising. The proceeds' allocation status is distinguished between the amount allocated to the transition assets and the amount not allocated. Each project operator manages it through the fundraiser's fund management system or dedicated forms. The funds raised will be managed in cash or cash equivalents until allocated, which is consistent with GLP.

Principle 4: Reporting

The fundraiser plans to disclose information to the lender or the public on a regularly scheduled basis, to the extent practicable, on the status of the allocation of funds for eligible projects and the environmental improvement benefits (group-wide GHG emission reductions) until the funds raised are allocated, which is consistent with GLP's approach. If there is a significant change in the progress of construction prior to the launch of the eligible project, fundraiser will disclose such change in a timely manner.

Based on an assessment of the framework and other relevant documents and information provided by the fundraiser, DNV has confirmed that the framework meets the criteria required by the appropriate schemes and is eligible for transition finance. DNV also confirmed that the planned transition loans are expected to be appropriately designed and implemented in conformance with the framework.



I. Introduction

About the fundraiser

Overview

Sumitomo Chemical Co., Ltd. (hereinafter, "Sumitomo Chemical," the "Business Operator," the "Fundraiser") is a major diversified chemical company founded in 1913 and is the core business of the Sumitomo Chemical Group, which consists of the company and 313 affiliated companies (as of March 2021). Based on a portfolio of five business units (Petrochemicals, Energy & Functional Materials, IT-related Chemicals, Health & Crop Sciences, and Pharmaceuticals), the company is committed to creating next-generation businesses by focusing on R&D and business development in four key areas (healthcare, environmental impact reduction, food, and ICT).

Sumitomo Joint Electric Power Co., Ltd. (hereinafter, "Sumitomo Kyodo Electric," "the Business Operator," "the Fundraiser") is an electric power company based in Niihama City, Ehime Prefecture, and a consolidated subsidiary of Sumitomo Chemical (52.52% shares held by Sumitomo Chemical). Sumitomo Joint Electric Power supplies electricity, steam, and carbon dioxide gas separated and produced from the exhaust gas of thermal power plants to Sumitomo Group-affiliated businesses operators and factories located in Niihama and Saijo City.

Company philosophy

Sumitomo Chemical defines "promotion of sustainability" as contributing to developing a sustainable society through their business and achieving sustained growth for our company, which is clearly stated in the Framework of Sumitomo Chemical's Corporate Philosophy. With the "Sumitomo Spirit" that has been with them since our founding as their fundamental spirit, they have set forth the basic spirit, mission, and values of Sumitomo Chemical as Business Philosophy. In addition, they have established the Basic Principles for Promoting Sustainability to express their thinking and commitment to the promotion of sustainability throughout the Group.

Framework of Sumitomo Chemical's Corporate Philosophy



From Sumitomo Chemical Annual Report 2021



The history of Sumitomo Chemical began when gasses from a copper smelting process caused a pollution problem, and there was an urgent need for a solution. Sumitomo Chemical was founded to resolve this problem, using those gasses as the raw material for fertilizer manufacturing, overcoming an environmental problem while also improving agricultural productivity. Sumitomo Chemical's commitment to sustainability is rooted in this founding history. In other words, the philosophy of resolving problems facing society through its business is in the DNA of the Sumitomo Chemical Group. The Basic Principles for Promoting Sustainability is positioned next to Sumitomo Spirit and Business Philosophy to demonstrate the management's commitment to promoting sustainability.

Sumitomo Chemical's Basic Principles for Promoting Sustainability

Basic Principles for Promoting Sustainability

We at the Sumitomo Chemical Group are committed to promote sustainability by acting in accordance with Six Basic Principles, guided by the Sumitomo Spirit and the Group's Business Philosophy, namely contributing to establishment of sustainable society through achieving sustainable growth of business.

Principle 1: Creating economic value which helps create social value (Promoting our credo "Our businesses must benefit society at large, not just our own interests (Jiri-Rita Koushi-Ichinyo)")

We are committed to promote creating economic value (*jiri**) which helps to create social value (*rita**) through offering technological or other innovation so that we can continue to grow as a business group that earns the trust and confidence of society.

Principle 2: Contribution to solving globally vital issues

We are committed to contribute to solving a variety of issues that are globally vital, such as establishing diverse and inclusive society and achieving the Sustainable Development Goals (SDGs), as well as doing business in compliance with accepted universal standards and principles, including those concerning human rights, labor, safety, the environment and anti-corruption.

Principle 3: Active participation in global initiatives

We are committed to play a leadership role in multilateral initiatives through actively participating in various partnerships domestically and overseas with international organizations, national or local governments, business corporations, industrial associations, universities, academic circles, civic communities, etc.

Principle 4: Collaboration with stakeholders

We are committed to work closely with various stakeholders through promoting spontaneous disclosure of information and open dialogue on the targets of our sustainability promotion initiatives and the progress of their implementation.

Principle 5: Top management commitment and participation by all

We are committed to carry out initiatives toward promoting sustainability, led by our top management having taken firm pledges to this end and advanced by all officers and employees, across the Sumitomo Chemical Group with a shared strong sense of mission and great enthusiasm.

Principle 6: Enhancing Corporate Governance

We are committed to assess and improve our activities continually and proactively for promoting sustainability by reviewing the progress of the activities periodically and from holistic viewpoints.

From Sumitomo Chemical Sustainability Data Book 2021

^{* &}quot;Jiri-Rita Koushi-Ichinyo," while not expressly stated, is also regarded as an embodiment of the Sumitomo Spirit in that Sumitomo's businesses must benefit the nation and society at large, not just our own interests.

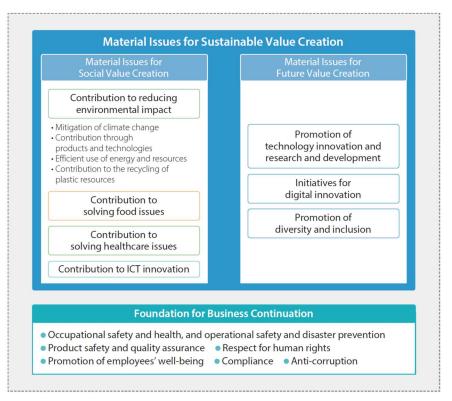
ii. Fundraiser's initiatives for sustainability

Materiality for management

Sumitomo Chemical has a process for identifying material issues to be addressed based on its corporate philosophy. In the specific identification process, issues are first identified and organized in two dimensions: economic value (importance to the business) and social value (importance to society), and then the Sustainability Promotion Committee (chaired by the president), which is composed of senior management, deliberates on the issues. After deliberation, the committee categorizes materiality into two categories: Material Issues for Social Value Creation and Material Issues for Future Value Creation.

Climate change mitigation is the first item to be addressed in the "Contribution to reducing environmental impact" section of the "Material Issues for Social Value Creation." These material issues were deliberated by the Management Committee and approved by the Board of Directors in February 2019 and are being incorporated into the medium-term management plan that started in April of the same year.

Material Issues for Sustainable Value Creation and the Foundation for Business Continuation



From Sumitomo Chemical Sustainability Data Book 2021



Contributing to the achievement of the Sustainable Development Goals (SDGs)

When identifying the material issues that Sumitomo Chemical addresses as management priorities, we referred to the SDGs as a guideline for surveying social needs and issues. In addition, with the aim of aligning our efforts with the contribution to the achievement of the SDGs, they have set the key performance indicators (KPIs) for their material issues for social value creation based on the SDG targets, which comprises 169 items.

Petrochemicals & Plastics

7 ATRIBULATION DO BY MODERN MONITOR AND AND PLASTICS AND PLASTIC

Specific SDGs for Each Business Sector to Focus on

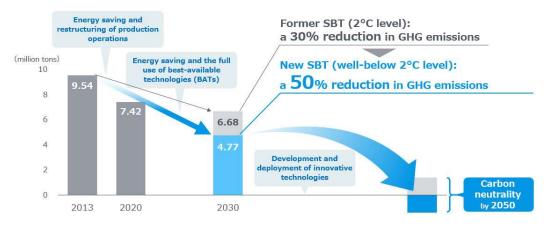
From Sumitomo Chemical Sustainability Data Book 2021

Key Performance Indicators (KPIs) for climate change mitigation

For each material issue to be addressed, Key Performance Indicators (KPIs) common to all business activities have been established for economic and social value. In particular, with regard to climate change mitigation, Sumitomo Chemical has accurately grasped the accelerating trend in the world toward the realization of carbon neutrality and actively revised the GHG emission reduction targets set in the mid-term management plan that started in 2019. In December 2021, they announced a new goal of reducing GHG and a grand design (transition strategy) to achieve carbon neutrality.



New Goal of Reducing GHG



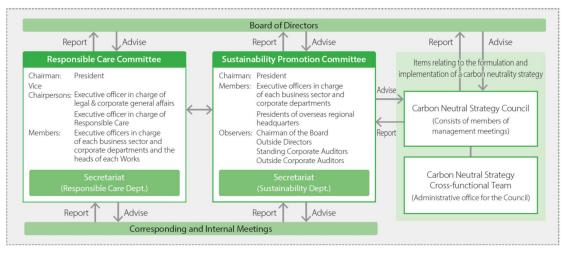
From Sumitomo Chemical News Release (December 10, 2021)

The KPIs (GHG emission reduction targets) for climate change mitigation are expected to help manage the progress of internal initiatives and promote dialogue with internal and external stakeholders by promoting information disclosure, leading to the enhancement and acceleration of efforts to achieve carbon neutrality.

Management System for carbon neutrality

In February 2021, Sumitomo Chemical established the Carbon Neutral Strategy Council to clarify the management structure for formulating and promoting an integrated strategy to achieve carbon neutrality. In addition, a Carbon Neutral Strategy Cross-functional Team has been assigned as the secretariat to provide practical support to the Council.

Organization of Addressing Climate Change



From Sumitomo Chemical Sustainability Data Book 2021



With this new organization of the Council and Team, the primary responsibility for formulating and promoting strategies to achieve carbon neutrality has been made clearer. In addition, the Sustainability Promotion Committee, and the Responsible Care Committee, which have traditionally been responsible for analysing the climate change situation and risks, as well as for deciding and promoting material issues related to specific responses, will support the formulation of strategies by this Council. As a result, the decision-making roles for promoting the strategy have been clarified.

Sumitomo Chemical considers climate change a pressing challenge facing society. They are actively working to respond to risks and seize opportunities to address this issue. The Carbon Neutral Strategy Council and the Carbon Neutral Strategy Cross-functional Team, established in February 2021, took the lead in formulating a grand design for achieving carbon neutrality by 2050, based on the "Sumitomo Chemical Carbon Neutral Strategy Perspectives" as described below. This grand design was published in December 2021. From now on, they plan to promote specific initiatives based on this grand design.

Sumitomo Chemical Carbon Neutral Strategy Perspectives

Sumitomo Chemical Carbon Neutral Strategy Perspectives

Sumitomo Chemical aims to take a range of multifaceted approaches unique to a diversified chemical company, in our initiatives to achieve carbon neutrality by 2050 from the following four perspectives.

- 1) To minimize greenhouse gas (GHG) emissions associated with the Group's production activities through innovation, and provide and deploy new technologies across the world.
- **2** To drive innovations for GHG emissions reduction regarding materials used in society, and provide products and solutions that contribute to carbon neutrality from a Life Cycle Assessment* perspective.
- To actively engage in the development of technologies for recovery, separation, use and storage of GHGs emitted from other industries and from communities, and help the process by becoming part of a system that implements such technologies in society.
- 4 To take on the long-term challenge of developing carbon negative technologies to reduce the absolute volume of GHG in the atmosphere.

From Sumitomo Chemical Sustainability Data Book 2021

Grand Design and Strategy for achieving carbon neutrality

In December 2021, Sumitomo Chemical formulated and announced a grand design, including policies and activity targets for initiatives to achieve carbon neutrality by 2050. The Sumitomo Chemical Group aims to reduce GHG emissions by 50% by fiscal 2030 compared to fiscal 2013 and achieve carbon neutrality by 2050. To achieve this goal, and to realize carbon neutrality that is "unique to the Sumitomo Chemical Group" as the mission of a chemical company, Sumitomo Chemical has clarified its policy of promoting two initiatives: (1) "responsibility" to bring the GHG emissions of the Sumitomo Chemical Group close to zero, and (2) "contribution" to global GHG reduction through the products and technologies of the Sumitomo Chemical Group.

^{*} Life Cycle Assessment (LCA): A method for quantitatively assessing the environmental impact of a certain product or service across its entire life cycle, from the procurement of raw materials to its use and disposal.



In particular, about (1) "responsibility" to bring the GHG emissions of the Sumitomo Chemical Group close to zero, Sumitomo Chemical was the first diversified chemical company in the world to be certified under the SBT Initiative in 2018. And now, they have been approved again under the "well below 2° C", which significantly increases the GHG emissions reduction target by fiscal 2030. They promote scientific, logical, and quantitative initiatives and aim to achieve their approved target. To achieve this target, it is important to make thorough use of Best Available Technology (BAT) and thorough energy efficiency. Sumitomo Chemical plans to take a variety of initiatives, including the construction of a liquefied natural gas (LNG) power plant at its Ehime Works and the installation of a high-efficiency gas turbine power generator at its Chiba Works, which are candidates for the use of the proceeds of the transition loan. The fuel conversion to LNG with a lower CO_2 emission factor, which is the purpose of this funding, is an important preliminary step in the grand design (transition strategy).

Sumitomo Chemical's carbon neutral strategy (main measures for the medium and long term)

Getting to a 50% reduction by 2030

Aim to achieve targets to reduce GHG emissions based on what we can do ourselves



- Strengthened the competitiveness of and restructured Chiba Works and Ehime Works
- Set science-based targets (SBT certification)
- LNG power plant at Ehime Works (Under construction)
- High-efficiency gas turbine power generation facilities at Chiba Works (Under construction)
- Other energy conservation measures, including fuel conversions and BAT maximization

Getting to a net zero by 2050

- Convert to CO2-free energy
- Electrify plants. Develop and rapidly deploy innovative manufacturing process technologies
- Deploy circular carbon technologies (material and chemical recycling)
- Develop carbon-negative and CCU technologies

From Sumitomo Chemical ESG Meeting (14 December 2021)

It is also recognized that to achieve the net-zero goal in 2050, it will be difficult to achieve it using existing technologies alone, and innovation is necessary. Sumitomo Chemical Group will need to make various efforts to develop innovative technologies that contribute to Carbon dioxide Capture and Utilization (CCU) and carbon negativity and to implement them in society. It is expected that Sumitomo Chemical will use its long-cultivated technological capabilities to innovate to reduce GHG emissions and that this will be aligned with the investment plan as a specific transition initiative that includes business transformation.



iii. About Transition Finance

Investment plan for carbon neutrality

From 2013 to 2021, Sumitomo Chemical has invested and made decisions to invest approximately 80 billion yen in energy-saving measures at its plants and fuel conversion from coal and heavy oil to LNG to reduce GHG emissions. In addition, they are planning to consider investing approximately 120 billion yen by 2030. The plan includes energy savings and upgrading of production facilities at each plant, which is expected to reduce further (or contribute to reducing) GHG emissions, chemical recycling of plastic resources, and investment in technologies such as CO_2 separation and CCU, which is a prerequisite for future technological innovation.



From Sumitomo Chemical ESG Meeting (14 December 2021)

The Significance of Transition Finance and Sumitomo Chemical Group Transition Loan Framework

Sumitomo Chemical aims to achieve sustainable growth in corporate value by consistently achieving targets for financial indicators such as ROE and ROI. They set the ROE target of over 10 percent based on the idea of contributing to the realization of a sustainable society through their business and on their policy of implementing businesses that they believe will make an essential contribution to solving social issues, as long as a certain level of profitability can be expected. The D/E ratio (Interest-bearing liabilities/Total equity) is controlled to be around 0.7 times over the medium term, taking into consideration the need to maintain their credit rating, which allows flexible financing.



Net present value (NPV), internal revenue rate (IRR), payback period, etc., are traditionally used as economic indicators in individual investment decisions (e.g., new capital expenditures). Since fiscal 2019, to contribute to the creation of a sustainable society, we have been calculating an economic indicator that reflects our internal carbon pricing (10,000 yen per ton) for any project that is expected to increase or decrease CO_2 emissions, which is used in our investment decision-making.

Considering these factors, the financing through transition finance will promote active investment in facilities aimed at reducing GHG emissions, which will contribute to the expansion and strengthening of the business and, as a result, improve the financial base of Sumitomo Chemical, which is consistent with the financial strategy described above. The transition loan in accordance with the "Sumitomo Chemical Group Transition Loan Framework" is consistent with the Group's strategy, which aims to both "responsibility" for reducing GHG emissions to near zero and "contribute" to the realization of carbon neutrality through its business activities, on the premise that Sumitomo Chemical maintains a sound financial base.

Company name: Sumitomo Chemical Co., Ltd. and Sumitomo Joint Electric Power Co., Ltd.

Framework Name: Sumitomo Chemical Group Transition Loan Framework

Name of external review body: DNV Business Assurance Japan K.K.

Date of report: 03 February 2022

II. Scope and Objectives

Sumitomo Chemical has commissioned DNV to assess the "Sumitomo Chemical Group Transition Loan Framework" and the transition loans to be made under the framework. Our objective has been to implement an assessment on whether Sumitomo Chemical's transition loan meets the criteria established on CTFH, CTFBG, GLP, and GLGLs to provide a second party opinion on the eligibility of the transition loan.

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

In this report, no assurance is provided regarding the financial performance of Sumitomo Chemical's transition loan, the value of any investments, or the long-term environmental benefits of the transaction.

Reporting

(1)Scope of review*

$Th\epsilon$	e review	assessed	the	followina	elements	and	confirmed	their	alignment	with	the	aist	of	GBP/	/GLI	Ρ

\boxtimes .	Use of Proceeds	\boxtimes .	Process for Project Evaluation and Selection

(2)Role(s) of review provider

Management of Proceeds

\boxtimes	Consultancy (incl. 2 nd opinion)	Certification
	Verification	Rating
П	Other (please specify):	

(3) Standards/Guidelines to be applied

No.	Standards/Guidelines	Scheme Owner
1.	The Climate Transition Finance Handbook (CTFH)*1	International Capital Markets Association (ICMA), 2020
2.	Basic Guidelines on Climate Transition Finance (CTFBG)*1	Financial Services Agency of Japan, Ministry of Economy, Trade and Industry of Japan and Ministry of Environment of Japan, 2021
3.	Green Loan Principles (GLP)*2	Loan Market Association (LMA) and others, 2021
4.	Green Loan Guidelines (GLGLs)*2	Ministry of the Environment, 2020

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

^{*}The scope of review is to be applied as a part of the evaluation of the transition finance with use of proceeds

^{*}The four disclosure elements of CTFH and CTFBG are included in the scope of review

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





III. Responsibilities of Sumitomo Chemical and DNV

Sumitomo Chemical has provided the information and data used by DNV during the delivery of this review. DNV's second party opinion represents an independent opinion and is intended to inform Sumitomo Chemical and other interested stakeholders in Sumitomo Chemical's transition loan as to whether the established criteria have been met, based on the information provided to us. In our work, we have relied on the information and the facts presented to us by Sumitomo Chemical. DNV is not responsible for any aspect of the nominated projects and assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV shall not be held liable if any of the information or data provided by Sumitomo Chemical's management and used as a basis for this assessment were not correct or complete.

IV. Basis of DNV's opinion

To provide as much flexibility for the fundraiser, Sumitomo Chemical and Sumitomo Joint Electric Power as possible, we have adapted our Sumitomo Chemical's transition finance assessment methodologies, which incorporates the requirements of the CTFH, CTFBG, GLP, and GLGLs, to create a Sumitomo Chemical's Transition Finance Eligibility Assessment Protocol (hereinafter, "Protocol"). Please refer to Schedule-2. The Protocol is applicable to Sumitomo Chemical's transition loan under the CTFH, CTFBG, GLP, and GLGLs.

Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle behind the criteria is that a Climate Transition Finance should "provide an investment opportunity with transparent sustainability credentials" and "enable financing and investment for new or existing projects that provide environmental benefits."

As per our Protocol, the criteria against Sumitomo Chemical's transition loan to be reviewed is grouped into the following elements, represented by the CTFH, CTFBG, GLP and GLGLs:

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

- Element 1: Issuer (Fundraiser)'s climate transition strategy and governance
 The financing purpose should be for enabling a fundraiser's climate change strategy.
- Element 2: Business model environmental materiality

 The planned climate transition trajectory should be relevant to the environmentally material parts of the fundraiser's business model.
- Element 3: Transition is science-based including targets and pathway

 Fundraiser's climate strategy should reference science-based targets and transition
 pathways
- Element 4: Implementation transparency



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

(2) Four common components of a transition loan with use of proceeds

• Principle 1: Use of Proceeds

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

Principle 2: Process for Project evaluation and selection

The Project Evaluation and Selection criteria are guided by the requirements that a fundraiser of a transition finance should outline the process it follows when determining the eligibility of an investment using transition finance proceeds and outline any impact objectives it will consider.

• Principle 3: Management of Proceeds

The Management of Proceeds criteria is guided by the requirements that transition finance should be tracked within the issuing organization, that separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled should be made.

Principle 4: Reporting

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

Other: Review (External Review)

In cases where the fundraiser judges that an objective evaluation of its responses to Principles 1 through 4 in (1) and (2) above is necessary, it is considered useful to utilize a review by an external organization. Reviews include "second party opinion," "verification," "certification," and "rating."

V. Work Undertaken

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

i. Pre-funding assessment



- Creation of a Sumitomo Chemical-specific Protocol, adapted to the purpose of the Sumitomo Chemical's transition finance, as described above and in Schedule-2 to this assessment;
- Assessment of documentary evidence provided by Sumitomo Chemical on the Sumitomo Chemical's transition finance and supplemented assessment by comprehensive desktop research. These checks refer to current assessment best practices and standards methodology;
- Discussions with Sumitomo Chemical, and review of relevant documentation;
- Documentation of findings against each element of the criteria.

ii. Post-funding assessment (*not included in this report)

- Interviews with Sumitomo Chemical's managers and review of relevant document control
- Field research and (if necessary)
- Document creation of post-issuance assessment results

VI. Observations

DNV's findings and opinion are as described in (1) and (2) below:

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

Element 1: Issuer (Fundraiser)'s climate transition strategy and governance

DNV has confirmed that the purpose of Sumitomo Chemical's transition financing (transition loan) is to realize the company's carbon neutral strategy (i.e., Climate Transition Strategy). Sumitomo Chemical's transition strategy is consistent with the Japanese government's 2050 Carbon Neutral Goal and the "Technology Roadmap for the Chemical Sector," a science-based concept consistent with the Paris Agreement and is also an initiative that will contribute to the transformation of the Sumitomo Chemical's business. Details are as follows:

Governance (Organization for the advancement of carbon neutrality): DNV has confirmed that Sumitomo Chemical has established a Carbon Neutral Strategy Council and a Carbon Neutral Strategy Cross-functional Team to strengthen its sustainability promotion system to achieve carbon neutrality. As a result of this organizational reform, a system for monitoring climate change efforts and governance (organizational structure) for evaluation and management of these efforts were established. Among the new



management structures, the Carbon Neutral Strategy Cross-functional Team has been established to ensure that the board of directors' decisions are appropriately implemented. The team is composed of experts from across the Sumitomo Chemical Group who are equipped with mobility and execution capabilities.

Organization for the advancement of carbon neutrality

Built an organizational structure dedicated to advancing carbon neutrality under the supervision of the Board of Directors

Board of Directors

Carbon Neutral Strategy Council (Comprised of Executive Meeting members)

Carbon Neutral Strategy Cross-Functional Team

Sumitomo Chemical

Research Planning and Coordination Dept. (Corporate Planning Office Production Engineering Dept.)

Responsible Care Dept. (Sustainability Promotion Dept.)

Business Development Office for a Circular System for Plastics

Group companies (Sumitomo Chemical Europe S.A./N.V.)

Sumitomo Joint Electric Power

Gather experts from within the group to form a team capable of taking action and executing

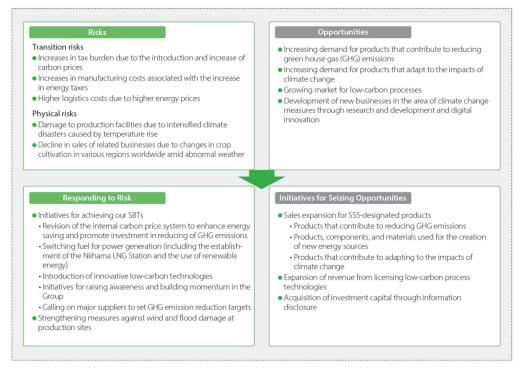
From Sumitomo Chemical ESG Meeting (14 December 2021)

Strategy for carbon neutrality (transition): As described above, Sumitomo Chemical has confirmed that its transition strategy initiatives, linked to its management strategy and business plan (investment plan), are managed by a highly effective management system. They have a system to formulate and review their carbon neutral (transition) strategy, using "Sumitomo Chemical Carbon Neutral Strategy Perspectives" as a guideline.

Climate Change-related risks and opportunities: About the risks and opportunities related to climate change issues, DNV confirmed the idea of understanding and analyzing the magnitude, scope of impact, and items, and then promoting the transformation of business models in a way that contributes to the realization of the Paris Agreement. Regarding risks, Sumitomo Chemical is mainly implementing measures to achieve Science Based Targets (SBT). With regard to opportunities, we are promoting the development of products and technologies of the Sumitomo Chemical Group that contribute mainly to the field of climate change as "Sumika Sustainable Solutions (SSS)" under our certification system and focusing on their dissemination to markets and customers.



Climate Change-related risks and opportunities



From Sumitomo Chemical Sustainability Data Book 2021

Scenarios related to climate change: DNV has confirmed that Sumitomo Chemical has selected multiple scenarios related to climate change and is considering the impact of climate change on their business and management and predicting changes in the business environment due to climate change impacts and long-term policy trends response to climate change. At present, Sumitomo Chemical is conducting scenario analysis from both risk and opportunity perspectives using the 1.5°C (Reduced GHG Emissions) scenario and the 4°C (Business as Usual) scenario and is continuously examining possible situations, assessing the impact on their business, and considering actions to be taken in the future.

Transition pathway: DNV has confirmed that Sumitomo Chemical's transition pathway is consistent with the "Technology Roadmap for the Chemical Sector on Transition Finance" (hereinafter "Chemical Sector Roadmap") published by the Ministry of Economy, Trade and Industry in December 2021, in addition to the transition pathway along with the benchmark SBTi.

The Chemical Sector Roadmap can be used as a reference for companies in the domestic chemical industry as they consider climate change measures using transition finance. It mainly deals with technologies for low-carbon and decarbonization in the chemical field, and GHG reduction scenarios have been developed for naphtha cracking, feedstock conversion, final products, recycling, inorganic chemistry, and steam and electricity on-site use, considering the timing of their practical application. Sumitomo Chemical Group



is promoting fuel conversion in the relevant manufacturing areas, collaboration with customers and local governments for recycling in the supply chain, and research and development for feedstock conversion, which is consistent with the timing of each measure and the level of reduction targets in the relevant areas of the Chemical Sector Roadmap. This is consistent with the timing of actions and the level of reduction targets in the relevant areas of the Chemical Sector Roadmap.

Environmental and social impacts other than climate change: DNV has confirmed that Sumitomo Chemical has appropriately considered possible environmental and social impacts other than climate change within their existing framework in implementing their transition strategy. In particular, about the construction project of LNG-fired power generation facility, which is the subject of the transition loan, DNV has confirmed the consistency of the project with the Sumitomo Chemical Group's policy on energy conversion, as well as the compliance with the code of conduct and policies and guidelines established by each of the Group companies. In addition, Sumitomo Chemical complies with environmental laws and regulations, considering regional characteristics, and implements measures to reduce environmental risks, such as conducting environmental impact assessments, as necessary, when negative impacts are foreseen because of project implementation. DNV also confirmed that there will be no significant negative impact on employment status because of the project.

Responding to significant changes in the external environment: DNV confirmed that Sumitomo Chemical sees policy developments such as the carbon tax in Japan and Carbon Border Adjustment Mechanism within the EU as significant changes in the external environment in terms of carbon-neutral related policies. To address these changes, Sumitomo Chemical is introducing an internal carbon pricing system (10,000 yen per ton) in 2019 and plans to calculate this new economic index to make investment decisions in response to anticipated future changes in the external environment. DNV confirmed that Sumitomo Chemical has established a system that enables it to appropriately change and modify the content of its transition strategy according to the situation.

• Element 2: Business model environmental materiality: DNV confirmed that the trajectory of Sumitomo Chemical's planned transition relates to an essential part of the fundraiser's business model in terms of the environment, particularly in addressing climate change. In addition, Sumitomo Chemical has considered several future scenarios that may affect its current judgment on material items. The details are as follows.

Environmental material issues (materiality): Sumitomo Chemical has identified climate change mitigation, in the broad sense of the term, as a material issue to reduce environmental impact, and has positioned it as a core issue. Sumitomo Chemical has identified "contribution through products and technologies," "efficient use of energy and resources," and "contribution to the recycling of plastic resources" as environmental



material issues other than climate change response and has decided to address them as critical management issues that will contribute to the transformation of its business activities.

Climate change-related scenario: Sumitomo Chemical expressed its support for the TCFD recommendations as soon as they were released in June 2017 and has continued to disclose information in accordance with those recommendations. In disclosing the strategies suggested in the TCFD recommendations, multiple climate scenarios have been used for analysis, with consideration of regional and industry characteristics. Initially, Sumitomo Chemical considered the IEA's WEO New Policy Scenario (4°C scenario) and the 450 Scenario (2°C scenario), but after the launch of the IPCC's 1.5°C Special Report, they revised their plan from a 2°C scenario to a 1.5°C scenario. At present, they are analyzing the "1.5°C (Reduced GHG Emissions) scenario", the "4°C (Business as Usual) scenario", and the "Common for All Scenarios," which is a situation that can be assumed in both scenarios, from the perspective of both risks and opportunities, and considering the impact on our business and future actions to be taken. DNV confirmed that Sumitomo Chemical continues to reevaluate and disclose information, updating its scenario analysis to current world trends.

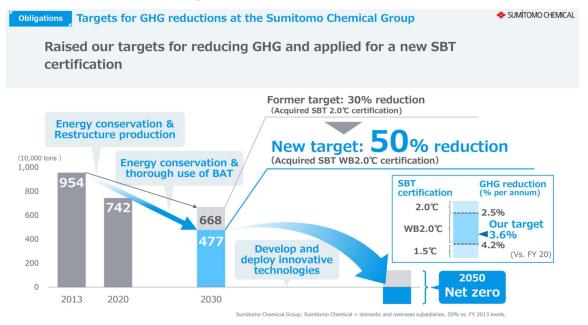
• Element 3: Science-based climate transition strategies, including goals and pathways

DNV has confirmed that Sumitomo Chemical's transition strategy is based on science-based goals and pathways for transition. Details are as follows:

SBTi Validation Initiatives: Sumitomo Chemical has set long-term goals that are consistent with the goals of the Paris Agreement and reasonable medium-term goals that are on track, and these meet the approval criteria and recommendations of Science-Based Targets initiative(SBTi). Sumitomo Chemical Group is the first diversified chemical company to obtain the approval of SBT in 2018. In addition, in the December 2021 renewal of validation, the Sumitomo Chemical Group obtained a new validation corresponding to the well-below 2°C target for Scope 1+2 (SBTi Version 4.2). As for Scope 3, a supplier engagement target was initially upgraded to a numerical target at the validation renewal. In addition, GHG reduction for Category 1 (Purchased goods and services) and Category 3 (Fuel- and energy-related activities not included in Scope 1 and 2), which account for more than two-thirds of the Sumitomo Chemical Group's Scope 3 GHG emissions.



New targets for GHG emission reductions



From Sumitomo Chemical ESG Meeting (14 December 2021)

GHG Emission Reduction Targets Certified under the Science Based Targets initiative (SBTi)



From Sumitomo Chemical Sustainability Data Book 2021

Medium- to Long-Term GHG Reduction Targets: Sumitomo Chemical considers SBTi certification an important management initiative to achieve carbon neutrality. They newly set the existing GHG reduction targets as absolute values for all of Scope 1, 2, and 3 at the timing of this validation renewal. DNV has confirmed that each target is quantitatively measurable based on consistent measurement methods.



Sumitomo Chemical's GHG reduction targets

	Group Scope1+2	Scope 3 of the group*1
Medium-term targets (2030 target)	50% reduction compared to FY2013 36% reduction compared to FY2020*2	14% reduction compared to FY2020*2
Long-term goals (2050 target)	Net zero achieved	Working to achieve carbon neutrality in 2050

^{*1:} limited to GHG emissions from Category 1 and Category 3 as defined in the GHG Protocol

• Element 4: Implementation Transparency

DNV confirmed that as Sumitomo Chemical pursues its transition strategy, it expects that its investment plans will be communicated appropriately with the lenders of the transition loans directly or through the loan arrangers if the loans are structured in syndication to ensure as much transparency as possible.

Investment Plan: As mentioned above, Sumitomo Chemical has invested approximately 80 billion yen from 2013 to the present in its overall carbon neutral (transition) strategy and is considering investing approximately 120 billion yen by 2030. Primary investment targets are expected to include energy-saving measures and upgrading of production facilities at factories to reduce GHG emissions, fuel conversion from coal and heavy oil to LNG, chemical recycling of plastic resources, as well as research and development of CO₂ separation and CCU technology, which is a prerequisite for future technological innovation. Investment plans may include research and development directly related to carbon neutrality and M&A and dismantling and removal costs of old facilities that indirectly contribute to carbon neutrality. The basic idea is that necessary costs and investments will be factored in as much as possible. DNV confirmed that the transition loan identifies the boundary for the use of funds (construction projects of LNG-fired power generation facility in Ehime and Chiba), making it possible to distinguish between expenditures for normal business activities and expenditures related to the transition.

Outcomes and Impacts: Sumitomo Chemical does not consider the direct deliverables and results (outputs) obtained from the individual projects that make up the investment plan fragmented, but rather the Sumitomo Chemical Group's comprehensive approach to the investment plan. In other words, it was confirmed that the individual results of each investment target are consistent with the overall goal, and that the reduction of GHG emissions of the entire group will lead to the impact of achieving carbon neutrality as an outcome. DNV has also confirmed that they can adequately address negative environmental impacts in the first instance by complying with domestic laws such as the

^{*2:} Updated and latest SBTi certification objectives



Environmental Impact Assessment Law. In terms of considering " just transition" in the investment plan, they especially took the negative impact on employment into account. In this transition loan, DNV confirmed that the project implementation would not cause any particular impact on employment status.

(2) Four common elements of a transition loan with use of proceeds

• Principle 1: Use of Proceeds

DNV has confirmed that the funds to be procured by the Sumitomo Chemical Group through the Transition Loan will be used for the construction, installation, operation, and maintenance of Project 1: "Construction Project of LNG-Fired Power Generation Facility in Niihama City, Ehime Prefecture" (Sumitomo Kyodo Electric Power) and Project 2: "Construction Project of LNG-Fired Power Generation Facility in Sodegaura City, Chiba Prefecture" (Sumitomo Chemical). It is planned that the procured funds will be used for new financing and/or refinancing of these subject projects. Details are as follows:

Overview of the target project: This project is to promote thorough energy efficiency and low-carbon fuel use. To supply steam for the processes required in the production process of the chemical plant, a cogeneration system that can efficiently use energy is being constructed in the chemical plant to improve the overall thermal efficiency. In addition, a combined cycle power generation system with excellent power generation efficiency has been adopted to save energy and reduce CO_2 emissions. The fuel to be used has been changed from coal, heavy oil, and petroleum coke to LNG, and DNV has confirmed that the project is eligible for the use of Climate Transition Finance funds because of the high CO_2 emission reduction effect of the production activities and the consideration of measures against negative impact on the environment and society.

Contribution to the reduction of GHG emissions by two nominated projects

Contributing to Reducing GHG Emissions by Switching Fuel for Thermal Power Generation

Sumitomo Chemical is working to reduce GHG emissions as an SBT-certified company. At plants in Japan, we are introducing highly efficient gas turbine generators and decommissioning a number of existing boilers. Aiming to reduce carbon emissions, we are considering switching from using conventional high CO₂ emission intensity fuels like coal, petroleum coke, and heavy oil to using low CO₂ emission intensity fuels like liquefied natural gas (LNG).



One of Japan's Largest LNG Tanks under Construction (At the Ehime Works Site)

Currently, at Ehime Works, Niihama LNG Co., Ltd.* is constructing the Niihama North Gas-Fired Power Plant, which uses LNG instead of the conventional coal or heavy oil. Plans call for this LNG-fired power plant to start operations in July 2022 through the Group company Sumitomo Joint

Electric Power Co., Ltd., and the switchover to this power source is expected to result in a 650,000-ton annual reduction in CO2 emissions. In addition, we plan to construct highly efficient gas turbine power generation equipment at Chiba Works that uses LNG instead of the existing petroleum coke, looking to complete construction in autumn 2023. With the construction of this equipment, we expect to reduce annual CO2 emissions by over 240,000 tons (equivalent to around 20% of the CO2 emitted by Chiba Works). It will also enable the supply of power to neighboring Group companies as we work hard to reduce GHG emissions across the entire Group.

* Funded by Tokyo Gas Engineering Solutions Corporation, Shikoku Electric Power Co., Inc., Shikoku Gas Co., Ltd., Sumitomo Joint Electric Power Co., Ltd., and Sumitomo Chemical

From Sumitomo Chemical Sustainability Data Book 2021

Eligible projects details

<Project 1>

Project name	Construction Project of LNG-Fired Power Generation Facility in Niihama
Project overview	City, Ehime Prefecture Sumitomo Kyodo Electric Power will build the Niihama North Thermal Power Plant in the Niihama district of Sumitomo Chemical's Ehime Works, using liquefied natural gas (LNG) and effective use of byproducts gas (hydrogen) generated in the production process of chemical plants. They will combine the power generation equipment with cycle power generation, which has excellent energy conservation and CO2 reduction efficiency. A new LNG terminal (not covered by this financing) will be constructed within the Ehime Works in conjunction with this project. Introducing the LNG fuel supply route into the Ehime Works will shift from existing fuels with high CO2 emission factors. In addition to fuel conversion, the excess low-pressure steam generated during the power generation process will be effectively used in the chemical plant. [新展新北大力発電所 発電政備概念図] Construction of Niihama North Thermal Power Station (Sumitomo Joint Electric Power Co., Ltd., 6 February 2018)
Location	5-1 Sobai-cho, Niihama City, Ehime Prefecture (Niihama District, Ehime Works, Sumitomo Chemical)
Businesses/Fundraisers	Sumitomo Joint Electric Power Co., Ltd.
Type of prime mover	LNG-fuelled gas turbines and steam power (combined cycle power generation system)
Equipment output	Power generation: Maximum 150,000 kW (50,000 kW x 3 trains)
	Steam: 35tonnes/hour x 3 trains
Planned start of	Autumn 2022
operations	
Total investment Approx. 25 billion yen (North thermal power station only, not	
	peripheral equipment)
Planned amount and	Approx. 8 billion yen (March 2022)
timing of funding	



Allocation plan for the project	The approximately 8 billion yen raised will be repaid (refinanced) in 2021 against the entire bridge loan of the same amount already raised. The difference between the total investment amount and the fundraising amount, approximately 17 billion yen, will be funded from cash on hand.
Finance period	9 years
Projected emission reductions from covered projects	 6510,000 tonnes/year Sumitomo Joint Electric Power is expected to reduce CO₂ emissions by switching from coal and heavy oil to LNG. The Ehime Works is expected to reduce CO₂ emissions by converting the fuel used in the Works from kerosene, heavy oil, LPG, etc. to LNG.
Counteracting negative impacts on the environment and society	As part of the environmental assessment for the construction of the power generation facility, the following issues were assessed during the construction period and after the start of operation: (a) air quality, (b) noise, vibration, and low-frequency sound, (c) white smoke from the cooling tower, (d) water quality, and (e) ecosystem of terrestrial and marine animals and plants. The results show that there will be little impact on the environment.

<Project 2>

Project name	Construction Project of LNG-Fired Power Generation Facility in
	Sodegaura City, Chiba Prefecture
Project overview	At Sumitomo Chemical's Chiba Works, the existing petroleum coke
	power generation facility will be discontinued, and a new, highly
	efficient combined cycle power generation facility will be built using
	LNG as fuel. In addition to fuel conversion, the excess low-pressure
	steam generated during the power generation process will be
	effectively used in the chemical plant.
Location	2-1 Kitasode, Sodegaura, Chiba (in the Chiba Plant of Sumitomo
	Chemical)
Businesses/Fundraisers	Sumitomo Chemical Co., Ltd.
Type of prime mover	LNG-fuelled gas turbines and steam power (combined cycle power
	generation system)
Equipment output	Power generation: over 45,000 kW
	Steam: over 80 tonnes/hour
Planned start of	Autumn, 2023
operations	
Total investment	Approx. 14.5 billion yen (of which approx. 3 billion yen is subsidised)
Planned amount and	Approx. 10 billion yen (autumn 2022)
timing of funding	
Allocation plan for the	Approximately 10 billion yen of the funding will be used to refinance
project	approximately 1.4 billion yen (= approximately 2 billion yen already



	spent - approximately -0.6 billion yen in subsidies) that has already
	been spent (funded by existing loans) between 2021 and 2022. The
	remaining 8.6 billion yen will be managed as unappropriated funds and
	will be used for future project expenses.
Finance period	Around 10 years
Projected emission	240,000 tonnes/year
reductions from covered	CO ₂ emissions are expected to be reduced by converting the fuel
projects	used at the Chiba Works (including Koei Chemical, an adjacent group
	company) from petroleum coke to LNG.
	The project is expected to improve the overall power generation
	efficiency and reduce CO ₂ emissions by introducing gas turbines
	instead of steam turbines for more efficient power generation.
Counteracting negative	No environmental assessment is required because the project scale
impacts on the	does not reach the scale subject to the Environmental Impact
environment and society	Assessment Law (Ministry of Economy, Trade, and Industry) and
	Chiba Prefecture Environmental Impact Assessment Ordinance.
	However, the project is subject to the agreement on environmental
	preservation concluded between Chiba Prefecture and Sodegaura
	City. Prior consultation was conducted in accordance with the
	provisions of Article 10 of the agreement, and the agreement was
	approved by the name of the Governor of Chiba Prefecture on
	December 10, 2021.



Lock-in measures for the projects: Sumitomo Chemical recognizes that as a precondition for the continued operation of these power generation facilities, consideration must be given to not prolonging the life of the LNG usage. To cope with this, they are considering co-firing hydrogen with LNG in the medium term, extracting hydrogen from ammonia, and adapting it in the long term. It is recognized that there are issues to be addressed in both measures, such as progress in technological development as fuel utilization and active distribution, and it is planned that these will be explored and widely deployed.

Hydrogen is recognized as a good match for natural gas. Compared to natural gas, hydrogen has the following combustion characteristics mainly: (1) lower calorific value, (2) faster combustion speed, and (3) higher adiabatic flame temperature. From this, it is recognized that technical issues are to be addressed, such as the occurrence of local hot spots due to high flame temperatures and the need to control thermal NOx generation when utilizing conventional LNG gas turbines. At the stage of the demonstration experiment, two main areas need to be modified to co-fire hydrogen in an LNG-fired gas turbine. The first is that the gas compressor needs to be enhanced to obtain the same amount of heat from hydrogen, which has less than 1/3 the calorific value per unit volume of LNG. The other is that the fast combustion speed of hydrogen makes the area around the burner hotter (possibly causing a backfire), so the specifications of the combustion cylinder need to be changed. As a solution to both issues, DNV confirmed that there are supported models available from overseas manufacturers and that domestic manufacturers have completed development and are in the process of commercializing some of their products.

Principle 2: Process for Project Evaluation and Selection

Through our review, DNV has confirmed that the two nominated projects mentioned above (construction project of LNG-fired power generation facility) are compatible with the efforts by the Carbon Neutral Strategy Council and the Carbon Neutral Strategy Crossfunctional Team, which formulate and promote strategies to achieve carbon neutrality in 2050 for the Sumitomo Chemical Group and that the projects are compatible with the Group's medium- and long-term GHG reduction targets.

In evaluating and selecting projects, the Responsible Care Department, and the Production Engineering Department, which are in charge of environmental and technological initiatives toward carbon neutrality, such as fuel conversion and energy conservation that led to GHG emission reduction, discuss candidate projects. In selecting projects, they check for consistency with the Sumitomo Chemical Group's energy conversion policy and check for compliance with the code of conduct and policies and guidelines established by each Group company. Furthermore, in addition to complying with environmental laws and regulations that consider regional characteristics, they implement measures to reduce environmental risks, such as conducting environmental impact assessments as necessary when negative impacts are foreseen because of project implementation.



DNV confirmed that the Finance Department, which is ultimately responsible for funding, has confirmed the project's conformity and that it will be approved through the appropriate internal processes.

Evaluation and selection

 \boxtimes . Conforms to the issuer's achievement of \boxtimes . Documented process to determine that projects environmental contribution goals fit within defined categories Documented process to identify and manage imes . The project is eligible for use of proceeds \boxtimes . by green bond and transparency is potential ESG risks associated with the project ensured. The project is evaluated and selected Other (please specify): based on the published standard summary

Information on Responsibilities and Accountability

☑. Evaluation / Selection criteria subject to☑. In-house assessment external advice or verification☐ Other (please specify):

• Principle 3: Management of Proceeds

DNV has confirmed that Sumitomo Chemical plans to allocate the funds to new financing or refinancing of eligible projects in a timely manner after the funding. Also confirmed that Sumitomo Chemical will be able to track and manage the funds appropriately until the redemption of the transition loan.

Specifically, the status of expenditures for each project will be managed by a core system that centrally controls the business operations of Sumitomo Chemical. As for project 1 will use the entire amount to repay the bridge loan that the project had raised in 2021 on the same day of loan disbursement (hence no look-back period has been set).

For Project 2, confirmed that the plan is to manage the actual expenditures managed by the core system using a particular form to ensure that the total amount of eligible projects is not less than the amount of funds raised. The unallocated funds will be managed in cash or cash equivalents until they are allocated.

Tracking of Proceeds:

\boxtimes	Some or all of the proceeds by green bonds that are planned to be allocated are systematically
	distinguished or tracked by the issuer.
	Disclosure of intended types of temporary investment instruments for unallocated proceeds
	Other (please specify): Unallocated proceeds are managed in cash or cash equivalents



Additional disclosure:

	Allocations to future investments only	\boxtimes	Allocations to both existing and future
			investments
\boxtimes	Allocation to individual disbursements		Allocation to a portfolio of disbursements
	Disclosure of portfolio balance of		Other (please specify):
	unallocated proceeds		

• Principle 4: Reporting

DNV has confirmed that the fundraiser plan to regularly disclose information on the "allocation status" and "environmental impacts" of eligible projects to the lenders or the public until all funds are allocated. The details and method of disclosure will be considered depending on the situation.

Confirmed that Sumitomo Chemical plans to report the status of fund allocation directly to the lenders at least once a year or disclose the status of fund allocation through Sumitomo Chemical's website, integrated reports, or other disclosure documents until all the raised funds are allocated to eligible projects. Any major changes in status after all proceeds have been allocated to the eligible projects will be reported to the lenders as appropriate.

About the effects of environmental improvements, as part of the environmental improvement activities of the entire consolidated Sumitomo Chemical Group, a governance system is in place to monitor the amount of GHG reductions (Scope 1+2 and Scope 3) in each fiscal year to achieve the Group's overall GHG reduction targets. DNV confirmed that Sumitomo Chemical would disclose information on GHG emissions by scope, covering the Sumitomo Chemical Group, at least once a year on its website, in its integrated report "Sumitomo Chemical Report" and "Sustainability Data Book," etc., to the extent practicable. Even after all the raised funds have been allocated to the eligible projects, they plan to disclose promptly any significant changes in the progress of construction even before the power generation facilities are operational.

The main reporting items are as follows.

<Status of appropriation of funds>

- Amount of funds allocated
- Amount of unappropriated funds raised
- Amount of funds raised to be used for refinancing



<Environmental benefits>

• Annual greenhouse gas emissions of Sumitomo Chemical Group on a consolidated basis (by scope)

Use o	f Procee	eds reporting:			
\boxtimes	Project-b	y-project		l	On a project portfolio basis
	Linkage 1	to individual bond(s)			Other (please specify):
	Information reported:				
		Allocated amounts		$ \boxtimes $	Percentage of the total investment amount that is used for transition financing
		Other (please specify):			
	Freque	ency:			
	\boxtimes A	Annual]	Semi-annual
		Other (please specify):			
Impa	ct repor	ting (Environmental Impact	:):		
	□ Project-by-project			Proj	ect-by-project
\square Linkage to individual bond(s) \boxtimes Sumitomo Chemic		nitomo Chemical Group unit			
Frequency:		ency:			
	\boxtimes	Annual			□ Semi-annual
		Other (please specify):			
	Infor	mation reported (expected or	ex-po	st):	
	\boxtimes	GHG Emissions / Savings			□ Energy savings
		Other ESG indicators (please specify):			
Mean	s of Disc	closure			
		ion published in financial report red Report)		Info	rmation published in sustainability report
	Informat	ion published in ad hoc documents		Othe	er (please specify):
	Reporting review)	g reviewed (if yes, please specify wh	ich par	ts of	the reporting are subject to external



• Other: Review (External Review)

Sumitomo Chemical uses an external review by DNV to determine transition loans' eligibility and increase objectivity. DNV assessed the "Sumitomo Chemical Transition Loan Framework" and the two nominated projects to be funded by this transition loan to confirm that they conform with all the CTFH, CTFBG, GLP, and GLGLs, and provided a second party opinion on their eligibility. DNV, as an independent external review organization, has no interest in the facts or perceptions of Sumitomo Chemical in providing a second party opinion.



VII. Assessment Conclusion

Based on the information provided by Sumitomo Chemical and the work undertaken, it is DNV's opinion that Sumitomo Chemical's framework and transition finance executed by the framework meets requirements in the eligibility assessment protocol and are consistent with the definition and purpose of Climate Transition Finance, which is to "provide an investment opportunity with transparent sustainability credentials" and" enable financing and investment for new or existing projects that provide environmental benefits."

DNV Business Assurance Japan K.K.

03 February 2022

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About DNV

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

Disclaimer

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



Schedule-1 Candidate Transition Loan Projects

The projects listed in the table are candidate eligible projects that have been assessed for eligibility at the time of the pre-financing assessment. Under the Transition Loan Framework, loans will be made exclusively to these eligible project candidates and will be reported in the pre-financing or post-financing reporting.

	Project name	Eligible project categories	Project overview
1)	Project for construction of LNG-fired power generation facilities in Niihama, Ehime Prefecture	Fuel conversion from petrochemical-derived fuels such as coal and heavy oil to LNG Increased efficiency of combined-cycle power generation (including heat utilisation)	 Type of power source: LNG-fuelled gas turbine and steam power (combined cycle power generation system) Power output: Maximum 150,000 kW (50,000 kW x 3 trains) Steam output: 35 tons per hour x 3 trains Scheduled start of operation: Autumn 2022 Total investment amount: Approx. 25 billion yen (North thermal power plant only, not including peripheral facilities) Planned amount and timing of financing by transition loan: Approximately 8 billion yen (March 2022) Financing period: 9 years *Additional information is provided in the report.
2)	Project for construction of LNG-fired power generation facilities in Sodegaura, Chiba Prefecture	Fuel conversion from petroleum coke to LNG Increased efficiency of combined-cycle power generation (including heat utilisation)	 Type of power source: LNG-fuelled gas turbine and steam power (combined cycle power generation system) Power output: 45,000 kW or more Steam output: 80 tons per hour or more Scheduled start of operation: Autumn 2023 Total investment amount: approx. 14.5 billion yen (including approx. 3 billion yen in subsidies) Planned amount and timing of financing by transition loan: Approximately 10 billion yen (autumn 2022) Financing period: Approximately 10 years *Additional information is provided in the report.



Schedule-2 Climate Transition Finance Eligibility Assessment Protocol

The checklists ($1\sim4$) below are DNV evaluation procedures created for eligibility assessment based on the disclosure requirements of CTFH and CTFBG. The "confirmed documents" in the Work Undertaken include public or private documents (materials inside the issuer), etc., and are provided by [company name] as evidence of eligibility judgment for DNV.

*Please replace "Issuer", "Investor" to "Borrower/Fundraiser", "Lender" in the context in the following requirements

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1	Issuer's Climate Transition Strategy and Governance	The financing purpose should be for enabling an issuer's climate change strategy. A 'transition' label applied to a debt financing instrument should serve to communicate the implementation of an issuer's corporate strategy to transform the business model in a way which effectively addresses climate-related risks and contributes to alignment with the goals of the Paris Agreement.	Confirmed documents /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers are considering transition loans as a way of helping to realise their own grand designs and strategies toward achieving carbon neutrality. DNV has also confirmed through its evaluation work that the fundraiser will communicate to their transition lenders, by using transition finance, that their corporate strategies are designed to transform their business models in ways that contribute to effectively addressing climate-related risks and aligning them with the goals of the Paris Agreement.
		 A long-term target to align with the goals of the Paris Agreement (e.g., the objective of limiting global warming ideally to 1.5℃ and, at the very least, to well below 2℃); Relevant interim targets on the trajectory towards the long-term goal; Disclosure on the issuer's levers towards decarbonisation, and strategic 		 Information and indicators already disclosed>. A long-term goal consistent with the Paris Agreement goal (to keep global average temperature increase well below at least 2°C compared to pre-industrial levels, ideally 1.5°C). Reasonable medium-term objectives that are on a trajectory towards long-term goals Disclosure of the issuer's measures to decarbonise and its strategic plan for long-term goals consistent with the Paris Agreement targets.



Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		 planning towards a long-term target to align with the goals of the Paris Agreement; Clear oversight and governance of transition strategy and, Evidence of a broader sustainability strategy to mitigate relevant environmental and social externalities and contribute to the UN Sustainable Development Goals. 		 Clear oversight and governance of the transition strategy A broader sustainability strategy to contribute to the UN Sustainable Development Goals (SDGs) while mitigating the associated negative environmental and social externalities.
2	Business model environmental materiality	The planned climate transition trajectory should be relevant to the environmentally-material parts of the issuer's business model, taking into account potential future scenarios which may impact on current determinations concerning materiality.	Confirmed documents /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the trajectory of the climate transition planned by the financier relates to the material environmental part of the issuer's business model. DNV also confirmed that, through its evaluation work, the fundraisers have considered several future scenarios that could influence their current materiality decisions.
3	Climate transition strategy to be science-based including targets and pathways	Issuer's climate strategy should reference science-based targets and transition pathways. The planned transition trajectory should: • be quantitatively measurable (based on a measurement methodology which is consistent over time); • be aligned with, benchmarked or otherwise referenced to recognized,	Confirmed documents /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers' climate strategies are based on science-based targets and pathways towards transition. DNV has also confirmed through its evaluation work that the planned trajectory of the fundraisers' transitions meets the following requirements • Can be measured quantitatively using consistent methods over a long period of time



Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		science-based trajectories where such trajectories exist; • be publicly disclosed (ideally in mainstream financing filings), include interim milestones, and; • be supported by independent assurance or verification Suggested information and indicators • Short, medium, and long-term greenhouse gas reduction targets aligned with Paris Agreement; • Baseline • Scenario utilised, and methodology applied (e.g. ACT, SBTi, etc.); • Greenhouse gas objectives covering all scopes (Scope 1, 2 and 3 ¹¹); and, • Targets formulated both in intensity and absolute terms		 Benchmarked transition pathways in line with SBTi accreditation standards published in a form that includes interim targets Recommended disclosure information and indicators Medium and long-term greenhouse gas emission reduction targets consistent with the Paris Agreement Baseline Scenarios and methods applied in line with SBTi accreditation criteria Greenhouse gas emission reduction targets covering all scopes (Scope 1, Scope 2, and Scope 3) Targets formulated in absolute terms
4	Implementation transparency	Market communication in connection with the offer of a financing instrument which has the aim of funding the issuer's climate transition strategy should also provide transparency to the extent practicable, of the underlying investment program including capital and operational expenditure. This may include R&D-related expenditure where relevant, and details of	Confirmed documents /01//02//03//04/ Interviews with stakeholders	DNV has confirmed through its evaluation work that it expects fundraisers to communicate their investment plans appropriately with transition lenders, either directly or through loan arrangers, and to be as transparent as possible. DNV has also confirmed through its evaluation work that communication is expected to be as transparent as practicable in relation to the basic investment plan, including capital expenditure (Capex) and operational and operating costs (Opex).



Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		where any such operating expenditure is deemed 'non-Business as Usual', as well as other relevant information indicating how this program supports implementation of the transition strategy, including details of any divestments, governance and process changes. Suggested information and indicators		
		 Disclosure on the percentage of assets/revenues/ expenditures/divestments aligned to the various levers outlined in Element 1 above; Capex roll-out plans consistent with the overall strategy and climate science 		



Schedule-3 Green Loan (Transition Finance with specific use of proceeds) Eligibility Assessment Protocol

The checklist below (GBP/GLP-1 to GBP/GLP-4) is a DNV evaluation procedure created for Transition Finance (Bond & Loan) Eligibility Assessment (Bond & Loan with specific use of proceeds) based on the requirements of GBP/GBGLs and GLP/GLGLs. "Confirmed documents" in the "Work Undertaken" includes documents inside the issuer and is provided as evidence of eligibility judgment for DNV.

In Schedule-3, it is referred to as GBP or GLP according to the practice, but this is the standard to be referred to in the case of financing that specifies the use of proceeds such as transition projects in transition finance (bonds and loan) that specifies the use of proceeds based on CTFH and CTFBG, so please read as the meaning of the transition as appropriate.

GBP/GLP-1 Use of proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1a	Types of funds	The types of green bonds are classified into one of the following types defined by GBP. · (Standard) Green/transition Bond · Green/transition Revenue Finance · Green/transition Project Finance · Other	Confirmed documents /01/ Interviews with stakeholders	Through its evaluation work, DNV has identified the following categories of transition finance (bonds/loans) Transition loans (for specific purposes)
1b			Interviews with	Through its evaluation work, DNV has ensured that the lenders will properly state in the loan agreements they intend to sign with fundraisers that the funds raised will be used for transition projects.



Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1c	Environmental benefits	All green projects to which the funds are used should have clear environmental benefits, the effects of which should be assessed by the issuer and, where possible, quantitatively demonstrated.	Confirmed documents /01//05//06/ Interviews with stakeholders	DNV has confirmed through its evaluation work that the two transition projects to be financed (LNG-fired power generation facility construction projects) have clear environmental benefits (GHG emission reductions), which will be assessed by the financiers and, where possible, quantified.
1d	Refinancing rate	If all or part of the proceeds are used or may be used for refinancing, the issuer will indicate the estimated ratio of the initial investment to the refinancing and, if necessary. Therefore, it is recommended to clarify which investment or project portfolio is subject to refinancing.	Confirmed documents /01/ Interviews with stakeholders	

GBP/GLP-2 Project selection and evaluation process

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
2a	Project selection process	Green bond issuers should provide an overview of the process of qualifying projects for which green bond funding will be used. This includes (but is not limited to): • The process by which the issuer determines that the project in question is included in the business category of a qualified green project. • Creation of criteria for eligibility of projects for which green bond funding will be used • Environmental sustainability goals	Confirmed documents /01//02//03//04//05//06//08//010 //011//013/ Interviews with stakeholders	Throughout the evaluation process, DNV has confirmed that the fundraisers have outlined the process by which they have determined the eligibility of projects for use of the funds raised. • The process by which an issuer determines that an eligible project falls within the business category of an eligible transition project. Targets for environmental sustainability



Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
2b	Issuer's Environment al and Social Governance Framework	In addition to criteria and certifications, the information published by issuers regarding the green bond process also considers the quality of performance of the issuer's framework and environmental sustainability.	Confirmed documents /01//02//03//04//05//06//08//010 //011//013/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the information published by fundraisers also takes account of the quality of performance in relation to environmental sustainability in transition loans.

GBP/GLP-3 Management of funds raised

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
3a	Tracking procedure-1	The net proceeds from of Green bonds should be managed in sub-accounts, included in sub-portfolio, or otherwise tracked. It should also be certified by the issuer in a formal internal process related to the issuer's investment and financing operations for the Green Project.	Confirmed documents /01//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the funds raised by transition loans are tracked in an appropriate manner. DNV has also confirmed that fundraisers manage transition projects appropriately within the formal internal processes associated with the fundraisers' lending operations.
3b	Tracking procedure-2	During the green bond redemption period, the balance of funds raised that is being tracked should be adjusted at regular intervals to match the amount allocated to eligible projects undertaken during that period.	Confirmed documents /01//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that over the repayment period of the transition loan, the balance of funding tracked will be adjusted at regular intervals to match the amount allocated to eligible projects during that period.
3c	Temporary holding If no investment or payment has been made in a qualified green project, the issuer should also inform the investor of the possible temporary		Confirmed documents /01//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that in the event of non-payment for eligible projects, the financier will also inform the lender of the envisaged temporary management of the balance of unappropriated funds.



GBP/GLP-4 Reporting

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
4a	Periodical Reporting	In addition to reporting on the use of proceeds and the temporary investment of unallocated proceeds, the issuer will consider each project at least once a year for projects to which the Green bond proceeds have been allocated, taking into account the following: A list of each project should be provided. -Confidentiality and competitive considerations -Outline of each project, expected sustainable environmental and social effects	Confirmed documents /01//016/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that, in addition to reporting on the use of funds raised and the temporary investment of unallocated funds, fundraisers should disclose information at least once a year on the projects to which the funds raised by transition loans have been allocated, considering the following: • Confidentiality and competitive considerations • An overview of each project and the expected sustainable environmental and social benefits



Schedule-4: Basic Guidelines on Climate Transition Finance Eligibility Assessment Checklist

The following checklist (from CTF-1 to CTF-4) are based on four "disclosure elements "which indicated in the "Basic Guidelines on Climate Transition Finance (CTF)" established by the Financial Services Agency, Ministry of Economy, Trade and Industry, and Ministry of the Environment in May 2021.

According to the CTF, "disclosure elements" are classified into the following three categories. Should: \odot recommend: \bigcirc be considered/possible: \triangle These expressions are used in the following context.

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

There is a supplementary explanation in the margin of each checklist for the annotations in the disclosure elements.

The number $/01/../02/\sim/19/$ listed in the "Work Undertaken" are documents confirmed through the eligibility evaluation work. Details (document name) are shown in Appendix. In addition to the confirmed documents, the "Work Undertaken" includes the case where the information obtained through discussions and interviews with the issuer is used as evidence.

CTF-1 Fundraisers' Climate Transition Strategies and Governance

Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
©	1-a)	Financing through transition finance should aim to implement or incentivize the achievement of transition strategies ⁹ . Such strategies should incorporate a long-term target to align with the goals of the Paris Agreement, relevant interim targets on the trajectory towards the long-term goal, disclosure on the levers towards	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation, DNV has confirmed that the fundraisers are considering transition loans as a way of helping to realise their own grand designs and strategies toward achieving carbon neutrality.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		decarbonization, and fundraiser's strategic planning.			
	1-b)	A transition strategy should serve to explicitly communicate the implementation of an issuer's strategy to transform the business model in a way which effectively addresses climate-related risks and contributes to achieving the goals of the Paris Agreement ¹⁰ . 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, improvement of / changes in manufacturing processes and products, and development and provision of products and services in new fields.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation, DNV has confirmed that the fundraisers will communicate that when they make a transition loan, their corporate strategy is designed to transform their business model in a way that contributes to effectively addressing climate-related risks and aligning with the goals of the Paris Agreement. We confirmed that we plan to do so. < Information and indicators already disclosed>. • A long-term goal consistent with the Paris Agreement goal (to keep global average temperature increase well below at least 2°C compared to pre-industrial levels, ideally 1.5° C). • Reasonable medium-term objectives that are on a trajectory towards long-term goals • Disclosure of the issuer's measures to decarbonise and its strategic plan for long-term goals consistent with the Paris Agreement targets. • Clear oversight and governance of the transition strategy A broader sustainability strategy to contribute to the UN Sustainable Development Goals (SDGs) while



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
					mitigating the associated negative environmental and social externalities.
0	1-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, it is recommended that the fundraiser also takes into consideration the impact of business innovations to society and environment other than climate change.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers have considered the non-climate environmental and social impacts of business transformation, such as job security, in implementing their transition strategies. DNV also confirms that, through its evaluation work, fundraisers have considered the non-climate environmental and social contributions of business change.
© (△)	1-d)	Climate change-related scenarios ¹¹ should 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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers have referred to internationally recognised climate change-related scenarios in developing their transition strategies. DNV has also confirmed through its evaluation work that fundraisers have considered the "Technology Roadmap for Transition Finance in the Chemical Sector" issued by the Government of Japan, considering regional and sectoral characteristics.
0	1-e)	Transition strategies and plans must be highly credible in terms of their effectiveness. Therefore, it is recommended that a transition	Yes No	Confirmed documents: /01//02//03//04/	Through its evaluation work, DNV confirmed that the fundraisers have developed transition strategies and plans that are linked to management strategies and



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		strategy and plan are linked to management strategy and business plan, including mediumterm management plans.	Not Applicable	Interviews with stakeholders	business plans such as the medium-term management plan, and that there is a high degree of confidence in their effectiveness.
Δ	1-f)	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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Throughout the evaluation process, DNV confirmed that fundraisers consider that the content of the transition strategy and plan can be changed or amended in the event of major changes in the external environment or other factors.
Δ	1-g)	In the initial phase of developing a transition strategy by the fundraiser, it is considered as an option for the fundraiser to indicate a plan for future implementation of items described with the words "recommended" and "be considered/ possible" in these Guidelines.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers are likely to implement the items listed as 'desirable' and 'conceivable' in the Core Principles in the future as they review their transition strategies in line with future changes in the external environment.
0	1-h)	In order to secure the effectiveness of the transition strategy, the fundraiser should establish an organizational structure ¹² for the board of directors and/or other such committee to oversee the activities addressing climate change and for management to play a role in	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers have established organisational structures to ensure the effectiveness of their transition strategies, to monitor climate change responses by boards of directors and other bodies, and to evaluate and manage their efforts.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		assessing and managing such climate-related activities.			
Δ	1-i)	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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that this transition loan is limited to the fundraisers and their group companies.
©	1-j)	Transition strategies should be disclosed in advance in a company's integrated report, sustainability report, statutory documents and other materials for investors (including such disclosures on the website). This also applies to the other three elements.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV confirmed that fundraisers disclose their transition strategies (grand designs) in advance, for example through their websites, integrated reports, and sustainability data books.
Δ	1-k)	It is possible to disclose transition strategies and elements concerning the governance guaranteeing that the execution of transition strategies is in alignment with the reporting frameworks such as the Recommendations of	Yes No Not Applicable	Confirmed documents: /01//02//03//04/	Through its evaluation work, DNV has confirmed that fundraisers disclose in a manner consistent with the framework of the TCFD recommendations on transition strategies and the governance that secures their implementation.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		the Task Force on Climate-Related Financial Disclosures (TCFD; Final Report) ¹³ .		Interviews with stakeholders	
0	1-1)	If the implementation of a transition strategy assumes impacts on society and environment other than climate change, it is recommended that the fundraiser explain the view underlying its approach ¹⁴ , 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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers have explained and disclosed the potential environmental and social impacts, other than climate change, of implementing the transition strategy in a way that enables fundraisers to properly assess the effects, and that the strategy considers its contribution to achieving the Sustainable Development Goals (SDGs). and that the strategy considers its contribution to achieving the Sustainable Development Goals (SDGs).
0	1-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 should be disclosed together with the underlying reason in a timely manner.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation process, DNV has confirmed that it will disclose in a timely manner any significant changes in the progress of construction, even after all financing has been allocated to the project in question but before the generation facility is operational, due to major changes in the external environment that the financier assumed when developing the transition strategy and plan. The company confirmed that it plans to do so.
0	1-n)	In terms of governance, it is recommended that disclosures include an organizational structure	∑ Yes	Confirmed documents:	Through its evaluation work, DNV has confirmed that fundraisers disclose the organisational structure



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		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.	No Not Applicable	/01//02//03//04/ Interviews with stakeholders	for monitoring the implementation of transition strategies and evaluating and managing initiatives, as well as the specific roles of the constituent organisations and management, and the process by which deliberations are reflected in management.
0	1-0)	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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	DNV carried out this review of transition loans as an external reviewer.
Δ	1-p)	It is recognized 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 - Appropriateness of the management process and governance for the transition strategy	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has conducted a review of fundraisers' transition strategies, in particular with regard to • Alignment of scenarios with short-, mediumand long-term objectives (see Element 3 for objectives) Consistency of • Confidence that the fundraiser's transition strategy will achieve its goals Appropriateness of the process and governance for managing the Transition Strategy



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

CTF-2 Business Model Environmental Materiality

Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
©	2-a)	Initiatives for achieving the transition strategy should be such that contribute to transforming core business activities that are environmentally material parts today and in the future. ¹⁵	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the project will contribute to the transformation of core business activities of environmental importance now and in the future in the implementation of the financier's transition strategy.
0	2-b)	When identifying business activities that are environmentally material parts, it is recommended that the fundraiser consider multiple climate change-related	Yes No Not Applicable	Confirmed documents: /01//02//03//04/	Throughout its evaluation work, DNV has ensured that funders have considered several future scenarios that could influence their current materiality decisions.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		scenarios that may possibly impact its judgment on the identification ¹⁶ .		Interviews with stakeholders	
Δ	2-c)	In terms of considering materiality, it is possible to apply existing guidance provided by an organization that creates standard criteria concerning sustainability reporting ¹⁷ .	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV confirmed that funders refer to the SDGs as a guideline for identifying societal needs and challenges with regard to materiality considerations, and that key performance indicators (KPIs) are set in line with the 169 SDG targets.
0	2-d)	The fundraiser should indicate that climate change is an environmentally material part of business activities ¹⁸ .	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that funders have indicated that climate change is an environmentally significant (material) aspect of their business activities.
0	2-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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that funders have referred to internationally recognised climate change-related scenarios in developing their transition strategies. DNV has also confirmed through its evaluation work that funders have considered the "Technology Roadmap for Transition Finance in the Chemical Sector" issued by the Government of Japan, considering regional and sectoral characteristics.

¹⁵ 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.



- 16 Scenario analysis using multiple climate-related scenarios is similar to that required by the TCFD Recommendations, and it is considered useful to refer to relevant guidelines and such like for implementation methods. An example is the document issued by the Ministry of the Environment: "Practical Guide for Scenario Analysis in line with TCFD Recommendations".
- 17 "The SASB Materiality Map" issued by the Sustainability Accounting Standards Board serves as a guidance concerning materiality.
- 18 As for the approach to identifying environmentally material business activities, it is possible to use the materiality map and such like and outline the level of materiality of climate change for one's entity.

CTF-3 Climate Transition Strategy to be Science-based Including Targets and Pathways

Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
0	3-a)	The fundraiser should reference science-based targets in developing its transition strategies.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers' climate strategies are benchmarked against transition pathways in line with SBTi accreditation criteria and are based on science-based targets and pathways towards transition.
•	3-b)	This should include mid-term targets (short- to mid-term targets) in addition to long-term targets for 2050 and be quantitatively measurable based on a measurement methodology which is consistent over a long period of time.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the trajectory of the fundraisers' planned transitions, which includes an intermediate (short- and medium-term) target as well as a long-term target for 2050, can be measured quantitatively over a long period of time and in a consistent manner.
0	3-c)	In addition, it is recommended that GHG reduction targets, which could	X Yes	Confirmed documents: /01//02//03//04//05//06//07//08/	Through its evaluation work, DNV has confirmed that the fundraisers have included a long-term



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
(△)		be formulated either in intensity and absolute terms, should consider environmental materiality and cover Scopes 1 through 3 of GHG Protocol, the international standard on supply-chain emissions. It is recommended that targets covering Scope 3 be set using a practical calculation method when it could be subject to significant reduction in the fundraiser's business model ¹⁹ . It is also possible to disclose the avoided emissions as necessary.	No Not Applicable	Interviews with stakeholders	target for 2050 as well as an intermediate target (short- to medium-term target), which can be measured quantitatively over a long period of time and in a consistent way.
© (△)	3-d)	Science-based targets are GHG reduction targets required for achieving the goals of the Paris Agreement and should be set while taking into account differences in regional characteristics and industries. In so doing, it is possible to refer to the following trajectories. - Scenarios widely recognized in the international community (Examples include the Sustainable Development	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers' climate strategy is benchmarked against a transition pathway in line with the SBTi accreditation criteria and is based on science-based targets and pathways towards transition. DNV has also confirmed through its evaluation work that the fundraisers have considered the "Technology Roadmap for the Chemical Sector on Transition Finance" issued by the Government of Japan, considering regional and sectoral characteristics.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		Scenario (SDS) outlined by the International Energy Agency (IEA) ²⁰) - 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 sector ²¹ , industries set out plans that are science-based achieving the Paris Agreement ²² and so on.			
©	3-e)	Short- to mid-term targets (with a term of three to fifteen years) should be set by referencing the aforesaid trajectories or on the pathway toward the long-term targets planned as benchmarks ²³ .	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers' climate strategies are set to be on a path towards the planned long-term goals, benchmarked against a transition path in line with the SBTi accreditation criteria.
Δ	3-f)	In doing so, since short- to mid- term targets will likely be set in consideration of various factors (including the starting point and track records of the issuer, timing	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers have set up a transition path in line with the SBTi accreditation criteria, considering, for example, whether various matters have already been implemented.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		of capital investments, economic rationality, cost-benefit analysis, and availability of technology necessary to achieve the targets), it is possible that the pathway may not necessarily be linear with the same slope at all times but may be nonlinear.			
0	3-g)	The fundraiser should disclose the short- to mid-term and long-term targets they have set, including the base years etc.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers disclose the medium- and long-term objectives they have set, including the base year.
©	3-h)	In order to show that long-term targets are science-based, disclosures should explain the methodology or trajectory used to define target, including the underlying reasons (e.g., characteristics specific to a region or industry). In particular, when reference is made to plans and industry roadmaps established by an industry, etc., the explanation	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers are setting up transition pathways in line with SBTi accreditation criteria, taking into account, for example, whether various matters have already been implemented, and have most recently renewed their SBTi accreditation based on the well-below 2°C target.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		should include that they are grounded in scientific basis.			
Δ	3-i)	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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers are aligned on the pathway to achieving carbon neutrality, the medium-term objectives on that pathway, the transition strategy, and their investment plans.
Δ	3-j)	Concerning targets and trajectories, obtaining expert reviews on the following is considered to be particularly useful: - 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	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//08/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the mid-term and long-term targets are science-based, as fundraisers have set up transition pathways in line with SBTi accreditation criteria and have most recently renewed their SBTi accreditation based on the well-below 2°C target.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		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 midterm targets aligned with long-term goals			

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

- 20 In addition to benchmarks indicated by the IEA, there are those referenced by the IPCC, such as RCP 2.6 (keep global warming to below 2°C), RCP 1.9 (keep global warming to below 1.5°C) and other related Transition Pathway Initiative (TPI) benchmarks. Meanwhile, scenario listings are available in the TCFD Technical Supplement and in the document published by the Ministry of the Environment: "Practical Guide for Scenario Analysis in line with TCFD Recommendations".
- 21 An example of a sector-specific roadmap formulated by a public organization is the "Roadmap to Zero Emission from International Shipping" (Ministry of Land, Infrastructure, Transport and Tourism; 2020).

 The Ministry of International Trade and Industry also plans to formulate a roadmap for high emission industries.
- 22 In utilizing a plan formulated at a sector level, it is necessary to have a credible proposition that the alignment with the Paris Agreement can be explained with scientific grounds.
- 23 While it is possible to set short- to mid-term targets by determining the standard based on an assumed use of best available technologies (BAT), consideration should be made as to whether the use of such technologies might make it difficult to achieve long-term targets.

CTF-4 Implementation Transparency



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
©	4-a)	In implementing transition strategies, the fundraiser should provide transparency of the basic investment plan to the extent practicable.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers disclose to the extent possible their basic investment plans in implementing their transition strategies.
0	4-b)	The investment plan includes not only capital expenditure (Capex) but also capital and operational expenditure (Opex). Therefore, costs related to research and development, M&A, and dismantling and removal of facilities are also subject to the investment plan. In other words, it is recommended that the investment plan incorporate, to the extent possible, expenditure and investment necessary for implementing the transition strategy.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that, where appropriate, a financier's investment plan should include not only capital expenditure (Capex), but also operational and operating costs (Opex). DNV has also confirmed that, where appropriate, investment plans can cover R&D-related costs, mergers, and acquisitions, and dismantling and demolition costs.
Δ	4-c)	It is recommended that the investment plan outline the assumed climate-related outcomes and impacts ²⁴ in a quantitative fashion where possible, along with the calculation methods and prerequisites ²⁵ . If quantification is	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the investment plans of the financiers have provided quantitative indicators of the envisaged climate-related and other outcomes (GHG emission reductions), together with assumptions on the scope of coverage and other factors.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		difficult, the use of external certification systems can be considered as a substitute for qualitative assessment.			
0	4-d)	In particular, when outlining the assumed climate-related outcomes and impacts, it is recommended that the disclosure include not only GHG emission reduction and other initiatives to ease climate change but also report how consideration of a "just transition" ²⁶ is incorporated into the transition strategy.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers are, in effect, considered to a just transition and that they consider the reduction of GHG emissions and mitigation of climate change to be a key outcome and impact, and will disclose GHG emissions by scope across the Group to the extent practicable.
0	4-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 any expenditures to mitigate such negative impacts be added to the plan.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers plan to monitor the implementation of the transition strategy to ensure compliance with the required environmental emission standards, in accordance with environmental assessment legislation and environmental protection agreements with local authorities.
©	4-f)	Moreover, the outcomes arising from investments included in the	Yes No	Confirmed documents: /01//02//03//04//05//06//07//016 /	Through its evaluation work, DNV has ensured that the results and targets generated by the investments in question are aligned with the respective GHG emission reductions.



DNV

Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		investment plan should align with the targets.	Not Applicable	Interviews with stakeholders	
○(△)	4-g)	Transition finance is a means to financially support the implementation of a transition strategy, and it is recommended that financing be provided for new initiatives. However, in the case of transition finance in the format of Use of Proceeds instruments, 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.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that it plans to use the entirety of the part of the proceeds on the same day as the loan is drawn down, to repay the bridge loan that the project had raised in 2021. As such, no look-back period has been set.
0	4-h)	It is recommended that investment plans be disclosed by linking the outcomes and impacts with the expenditures to the extent practicable ²⁷ .	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the financiers have individually estimated and disclosed the estimated GHG emission reductions to be achieved by each of the two projects in question.
0	4-i)	It is recommended that the fundraiser, after securing financing, reports any deviations between the initial plan and the actual expenditure, outcomes and impacts.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers intend to disclose in a timely manner any significant changes in construction progress, even after all financing has been



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		For any deviations, it is recommended that the underlying reasons be explained.			allocated to the target project but before the generation facility is operational.
©	4-j)	In cases where the Use of Proceeds bonds include refinancing, the fundraiser should provide an explanation on the lookback period set under the framework or other relevant methods along with the underlying reasons and factors.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers plan to use the entirety of the part of the proceeds on the same day as the loan is drawn down, to repay the bridge loan that the project had raised in 2021. As such, no look-back period has been set.
(△)	4-k)	While there are differences in business practices, such as the fact that loans are traditionally made based on the bilateral relationship between a borrower and a lender, it is recommended that disclosure on the above be made to the extent possible in order to ensure transparency and credibility of transition finance. However, if it is difficult to disclose such information to the public from the standpoint of confidentiality and competition, it is possible to report such information only to lenders or external	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05//06//07//016 / Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers will report on the transition loan to the extent practicable to ensure transparency and credibility, and they will also consider cases where information that is difficult to disclose to the public from a confidentiality or competition perspective will be reported only to the lender.



Ref.	No.	Disclosure elements	Requirement check	Work Undertaken	DNV Findings
		evaluation organizations without disclosing it to the public.			
Δ	4-1)	Similarly, in cases where the fundraiser is a small-to-medium-sized enterprise and it is difficult to disclose to the public the same content as that reported to the financier or an external evaluation institution, it is possible for the fundraiser to simplify the content of disclosure, for example, by limiting disclosure to a summary of h) to j) of this section.	Yes No Not Applicable	Interviews with stakeholders	The fundraisers are not SMEs.

²⁴ The Ministry of the Environment, in its "Concept Paper on Impact Finance", refers to impact as "a positive or negative change to the environment, society or economy caused by an organization and is not a direct deliverable or output but an outcome as a change brought about in terms of the environment, society or economy."

- 25 In disclosing impacts, outlining the amount of contribution to reducing 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 "Guideline for Quantifying GHG Emission Reduction Contribution" (METI, 2018). Furthermore, as for outcomes on research and development, it is possible to reference the IEA Measuring Innovation by Technology Readiness Level (TRL) or Importance for Net-Zero Emission, among others, and outline the progress in the R&D phase or the potential of reducing CO₂ emissions with the relevant technology by highlighting the importance of net-zero emissions.
- 26 A just transition is an attempt to ensure the wide sharing of virtual profits created through a transition to a green economy, as well as to support any party who will experience an adverse economic impact (be it a country, a region, an industry, a community, a worker, or a consumer). The concept of a just transition corresponds to several SDGs.
- 27 In particular, disclosure of investment plans is expected to be required for projects applicable to Use of Proceeds.



Schedule-5 Eligibility Assessment for Green Loan Guidelines (Bonds with Specified Purpose for Transition Finance)

The following check list (GLGLs-1 to GLGLs-6) is prepared based on the Green Loan Guidelines (GLGLs, MOE, 2020).

According to the GLGLs, Requirements/Evaluation aspects are divided into following two terms, Should: Recommend:O

The numbers /01/, $/02/ \sim /19/$ listed in the Work Undertaken column are the confirmed documents, and the details (document name) are shown in Reference document-1 (See the Attachment).

In addition to the confirmed documents, the Work Undertaken includes the case where the information obtained through discussions and interviews with the publishers is used as evidence.

This assessment applies as a requirement for Use of Proceeds based on CTFH and CTFBG, so any term "green" and "bond" in Schedule-6 should be read as "transition" or "finance (bond)".

GLGLs-1 Use of proceeds

Ref.	Sectio n	Requirements	Requirement check	Work Undertaken	DNV Findings
0	1-①	Proceeds of Green Loans should be used for Green Projects that have clear environmental benefits. The borrowers should assess such environmental benefits.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the funds raised by the financier through the transition loan are earmarked for projects that will result in environmental improvements (GHG emission reductions) and that such environmental improvements have been assessed by the borrower.



Ref.	Sectio n	Requirements	Requirement check	Work Undertaken	DNV Findings
0	1-①	The borrowers is recommended to quantify them where possible.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	DNV has confirmed through its evaluation work that the two transition projects to be financed (LNG-fired power generation facility construction projects) have clear environmental benefits (GHG emission reductions), which will be assessed by the financiers and, where possible, quantified.
0	1-④	Borrowers should explain in advance the use of proceeds in documents including contracts exchanged between parties involved.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the use of the funds raised was explained to the lenders in advance through the draft contracts exchanged between the parties involved and the application documents for government grants.
©	1-⑤	The provision of the information regarding the use of proceeds should specify the Green Project categories.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the explanation to lenders of the use of the funds raised is presented in line with the basic guidelines for transition projects.
0	1-⑤	In cases where individual Green Projects have been specified, it is recommended that issuers clearly	Yes No	Confirmed documents:	Through its evaluation work, DNV has confirmed that the fundraisers have specifically identified to lenders the



Ref.	Sectio n	Requirements	Requirement check	Work Undertaken	DNV Findings
		present the projects to lenders.	Not Applicable	/01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	individual transition projects for which the funds raised will be used.
0	1-⑥	In cases where Green Projects have incidental negative environmental impacts along with the alleged environmental benefits, borrowers should include information regarding these negative impacts (e.g., how they are assessed, how borrowers intend to address them) so that lenders and market participants can appropriately evaluate these impacts.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	Through its evaluation process, DNV has confirmed that the transition projects have been implemented in accordance with environmental protection legislation and regulations, and that the use of proceeds has been explained to lenders and other interested parties, to reduce the potential for negative environmental effects apart from the original environmental benefits. the lenders and other parties concerned.
0	1-⑦	In cases where Green Loan proceeds are used to refinance existing Green Projects, it is recommended that borrowers provide information to the lenders regarding (1) the amount (or the share) of the loan proceeds being allocated for refinancing, and (2) which Green Projects (or Green Project categories) may be refinanced. Furthermore, when using proceeds for refinancing Green Projects, the borrower is	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers have explained to lenders of transition loans the amounts that will be used to repay new investments and bridge loans.



Ref.	Sectio n	Requirements	Requirement check	Work Undertaken	DNV Findings
		recommended to indicate the applicable period of the Green Project refinanced (Lookback Period).			
0	1-⑦	When Green Loans are used multiple times to refinance an asset that requires long-term maintenance, the borrower should clearly disclose the asset's age, remaining life and the amount to be refinanced as of the time of procurement, evaluate the long-term sustainability of environmental benefits and receive an assessment from an outside agency for verification as necessary.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05 //06//07//010//011/ /012/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers plan to use part of the funds raised, in full, on the same day as the loan is disbursed to repay the bridge loan that the project had raised in 2021, and that this is acceptable for the purposes of this requirement/assessment item.

GLGLs-2 Process for Project Evaluation and Selection

Ref.	Section	Requirements	Requirement check	Work Undertaken	DNV Findings
©	2-①	Borrowers should provide lenders with information in advance regarding the following: the environmental sustainability objectives that the borrowers intend to achieve through the Green Loans;	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05/ /06//07//010//011//0 12//013/	Through its evaluation work, DNV has confirmed that the fundraisers explain their "environmental objectives" (the environmental benefits they intend to achieve through the transition loan) to lenders in advance.



Ref.	Section	Requirements	Requirement check	Work Undertaken	DNV Findings
				Interviews with stakeholders	
0	2-①	Borrowers should provide lenders with information in advance regarding the following: the criteria for determining the appropriateness of Green Projects based on the environmental sustainability objectives described above;	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05/ /06//07//010//011//0 12//013/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers have explained to the lenders in advance that the two transition projects in question are in line with the Climate Transition Finance Basic Guidelines.
©	2-①	Borrowers should provide lenders with information in advance regarding the following: the process for determining how Green Projects fit the criteria for the achievement of the environmental sustainability objectives.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05// 06//07//010//011//01 2//013/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers have explained to the lender in advance the rationale on which the two transition projects are considered to deliver environmental benefits appropriate for the use of the funds raised considering the fundraisers' transition strategy and science-based objectives. The rationale for the project was explained to the lenders.
0	2-⑥	It is recommended that the borrower explains to lenders in advance any environmental standards or certification that the borrower will refer to in evaluating and selecting a Green Project to be financed.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05// 06//07//010//011//01 2//013/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers have considered as a benchmark the "Technology Roadmap for the Chemical Sector on Transition Finance" issued by the Japanese Government for the two targeted transition projects, considering regional and industry specificities. The procurer confirmed that the two transition projects considered the "Technology Roadmap for Transition Finance in the Chemical Sector" issued by the Japanese Government as a



Ref.	Section	Requirements	Requirement check	Work Undertaken	DNV Findings
					benchmark, considering regional and sectoral characteristics.
0	2-⑦	If the borrower intends to establish exclusion criteria to identify and control such potentially material environmental and social risks of Green Projects, the borrower should explain them to lenders in advance as part of the criteria it applies.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05// 06//07//010//011//01 2//013/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers have identified negative environmental and social effects in the two targeted transition projects and have explained the measures to the lenders.
0	2-⑨	It is recommended that internal departments who have expertise, such as the environment related department, or external institutions are involved in the evaluation and selection process of Green Projects to ensure suitability from an environmental point of view.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05// 06//07//010//011//01 2//013/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the project selection process at the fundraisers involves departments with expertise, such as environmental departments, and external bodies for environmental assessment, and that checks, and balances are in place to ensure appropriateness from an environmental perspective.
0	2-11)	It is recommended that borrowers position their environmental objectives and criteria and information on their processes in the context of their comprehensive objectives, strategy, policies concerning environmental sustainability (e.g. medium-term management plan, sustainability strategy, CSR strategy) and provide an explanation to lenders.	Yes No Not Applicable	Confirmed documents: /01//02//03//04//05// 06//07//010//011//01 2//013/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that information on the environmental objectives, criteria, and processes for the two projects in question was placed in the context of the fundraisers' transition strategy (grand design) and explained to the lenders.



GLGLs-3 Management of proceeds

Ref.	Sectio n	Requirements	Requirement check	Work Undertaken	DNV Findings
0	3-①	Borrowers should track and manage the entire amount of Green Loan proceeds. These tracking and managing activities should be controlled by the borrower's internal processes.	Yes No Not Applicable	Confirmed documents: /01//014//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraiser plans to ensure that the full amount of funds raised is controlled and tracked by the fundraiser's internal processes, as appropriate.
0	3-②	As long as the Green Loans are outstanding, borrowers should conduct periodic checks (at least yearly) to ensure that the amount used for Green Projects is equal to, or greater than, the amount raised by the procurement of Green Loans or the sum of the amount used for Green Projects and the amount of the unallocated proceeds match the total amount of Green Loan proceeds.	Yes No Not Applicable	Confirmed documents: /01//014//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers periodically (at least once a year) check that the amount allocated to eligible transition projects matches the amount of funds raised by the loan, or that the sum of the amount allocated to projects and the amount of unallocated funds is consistent with the total amount of funds raised by the loan, until the transition loan is redeemed. (at least once a year).
0	3-②	If any of the proceeds remain temporarily unallocated, the borrower should explain to lenders how it intends to invest the balance of such unallocated funds and endeavor to promptly use such funds for Green Projects.	Yes No Not Applicable	Confirmed documents: /01//014//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that where unappropriated funds arise temporarily, the fundraisers explain to the lenders the expected temporary management of the unappropriated fund balance.



Ref.	Sectio n	Requirements	Requirement check	Work Undertaken	DNV Findings
©	3-④	In advance, borrowers should provide lenders with information on how Green Loan proceeds will be tracked and managed.	Yes No Not Applicable	Confirmed documents: /01//014//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers explain to lenders in advance how they will track and manage the funds raised.
0	3-⑤	It is recommended that borrowers keep evidenced documents appropriately that demonstrate how they tracked and managed Green Loans proceeds.	Yes No Not Applicable	Confirmed documents: /01//014//015/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraiser has document control rules for the management of the funds raised, including the appropriate storage of vouchers and other documents.

GLGLs-4 Reporting

Ref.	Secti on	Requirements	Requirement check	Work Undertaken	DNV Findings
0	4-①	Borrowers should report the latest information on the use of Green Loan proceeds to the financial institutions who are lenders and took part in the Green Loans after the procurement.	Yes No Not Applicable	Confirmed documents: /01//06//07//016/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers plan to report up-to-date information on the use of funds raised by the loan by the financier to the lender, the financial institution participating in the loan, after the loan has been made.



Ref.	Secti on	Requirements	Requirement check	Work Undertaken	DNV Findings
0	4-2	For a borrower to gain public acceptance by expressing that the procured loans are Green Loans, they need to ensure transparency. For this reason, if a borrower expresses that the procured loans are Green Loans, it should publicly disclose the latest information on the use of Green Loan proceeds after the procurement.	Yes No Not Applicable	Confirmed documents: /01//06//07//016/ Interviews with stakeholders	Throughout the evaluation process, DNV confirmed that the fundraisers plan to disclose up-to-date information on the use of the funds raised by the transition loan, either to the lender or on their website.
0	4-④	Borrowers should report or disclose the usage status of funds at least once a year until all the proceeds are used. Borrowers should report or disclose such information in a timely manner even after all the proceeds are allocated if there has been any major change in the situation.	Yes No Not Applicable	Confirmed documents: /01//06//07//016/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers' disclosures will be reported at least once a year until all funding has been allocated. DNV has also confirmed that fundraisers will disclose in a timely manner any significant changes in construction progress, even after all funding has been allocated to the project, but before the generation facility is operational.
©	4-⑤	Reported or disclosed information should include the following contents: <matters disclosure="" or="" pertaining="" reporting="" to=""> - A list of the Green Projects to which Green Loan proceeds have been allocated - A brief description of each Green Project (including up-to-date</matters>	Yes No Not Applicable	Confirmed documents: /01//06//07//016/ Interviews with stakeholders	 Through its evaluation work, DNV has confirmed that fundraisers include the following items in their disclosure information: List of transition projects to which the funds raised have been allocated Appropriation of funds (amount of funds appropriated and amount of funds not appropriated)



Ref.	Secti on	Requirements	Requirement check	Work Undertaken	DNV Findings
		progress) The amount allocated to each Green Project The expected environmental benefits of each Green Project Information regarding unallocated Green Loan proceeds (the amount of the unallocated proceeds or the share of the unallocated proceeds to the total amount of the proceeds, and when the unallocated proceeds are expected to be allocated to Green Projects) A borrower is small-medium, reported and disclosed information can be simplified, if it is difficult to disclose the same contents which a borrower reports to a lender.			the environmental benefits expected to accrue to the group of fundraisers as a whole
0	4-6	If Green Loan proceeds have been allocated to the refinancing of existing projects, it is recommended that disclosed information include: (1) the approximate amount (or the share) of the allocated proceeds used for refinancing, and (2) a list of the Green Projects (or the project categories) refinanced.	Yes No Not Applicable	Confirmed documents: /01//06//07//016/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that the fundraisers provide appropriate disclosure to the lenders of the amounts that will be used to repay new investments and bridge loans.
0	4-⑦	While it is recommended to disclose (v) and (vi) on a project-by-project basis, if there are confidentiality agreements, competitive considerations, or a large	Yes No Not Applicable	Confirmed documents: /01//06//07//016/	Through its evaluation work, DNV has confirmed that fundraisers will disclose information on a project-by-project basis or in an aggregated format to the extent practicable.



Ref.	Secti on	Requirements	Requirement check	Work Undertaken	DNV Findings
		number of underlying projects that limit the disclosure of details, it is considered that information is presented in generic terms or in an aggregated portfolio.		Interviews with stakeholders	
©	4-10	When disclosing information regarding the expected environmental benefits of projects, borrowers should use appropriate indicators, while ensuring consistency with the characteristics of Green Projects.	Yes No Not Applicable	Confirmed documents: /01//06//07//016/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that, when disclosing information on environmental improvements, fundraisers will disclose GHG emissions to the extent practicable and appropriate.
0	4-11)	When disclosing the expected environmental benefits of projects, it is recommended that borrowers, where feasible, use quantitative indicators and disclose information on methodologies and/or assumptions as well as these indicators.	Yes No Not Applicable	Confirmed documents: /01//06//07//016/ Interviews with stakeholders	Through its evaluation work, DNV has confirmed that fundraisers should disclose quantitative information on the emissions of each scope for the entire group of the fundraisers when disclosing information on environmental improvements.

GLGLs-5 internal reviews

Ref.	Section	Requirements	Requirement check	Work Undertaken	DNV Findings
0	5-(3)@	If the borrower performs self-certification, it should inform the lenders in advance and explain with sufficient transparency its internal expertise	Yes No Not Applicable	Confirmed documents: This report	The fundraisers have used external reviews for the transition loan framework to be evaluated objectively. When conducting selfassessments, the fundraisers plan to explain



Ref.	Section	Requirements	Requirement check	Work Undertaken	DNV Findings
		upon formulation of the self-certification process pertaining to the green loan framework.		Interviews with stakeholders	to the lenders that they are following the framework and their internal processes.
©	5-(3)③	Borrowers are recommended to document their internal expertise. This documentation should be communicated to the lenders on request. The self-certification results should also be reported to the lenders on request.	Yes No Not Applicable	Confirmed documents: This report Interviews with stakeholders	The fundraisers have established documented internal processes for the evaluation and selection process of eligible projects and for the management of the funds raised. It will report on the results of these processes when requested by the lenders.
©	5-(3)④	When appropriate, and taking into account confidentiality and competitive considerations, borrowers should make publicly available, via their website or otherwise, their decision to review the Green Loan based on self-certification as well as the parameters based on which they assess Green Projects and the internal expertise they have to assess such parameters.	Yes No Not Applicable	Confirmed documents: This report Interviews with stakeholders	When fundraisers conduct self-assessments through transition loans, they plan to conduct them based on internal processes defined in the framework in advance. The results will be disclosed to the lenders directly or through the loan arrangers.
0	5-(3)④	For a borrower to gain public approval by expressing that the procured loans are Green Loans, they need to ensure transparency. It is therefore recommended that they make the self-certification results publicly available via their website or otherwise.	Yes No Not Applicable	Confirmed documents: This report Interviews with stakeholder	When fundraisers utilise transition loans on a self-assessment basis only, they intend to disclose the results of the self-assessment either directly to the lenders or through the loan arranger.



List of reference materials

/01/	Sumitomo Chemical Group Transition Loan Framework
/02/	Annual Report 2021
/03/	IR-related materials:
	a. ESG Presentation (December 24, 2021)
	b. Management Strategy Presentation (June 3, 2021)
/04/	Sustainability Data Book 2021
/05/	Eligible project Information:
	a. Project 1 Summary Information (confidential)
	b. Project 2 Summary Information (confidential)
	c. Project 1 News Release Material (January 07, 2022)
	d. Project 2 News Release Material (October 05, 2020)
/06/	Basis for calculation of expected emission reductions from the project
/07/	Basis for calculating the base year for GHG Scope 1/2 emissions
/08/	Materials related to lock-in measures:
	a. Description of technical issues and measures for the facility to be installed
	b. Explanatory materials from gas turbine manufacturers (hydrogen-fired gas turbines)
/09/	News release material on grand design (transition strategy) (December 10, 2021)
/010/	Environmental Impact Assessment-related materials (Project 1)
/011/	Environmental Conservation Agreement related materials (Project 2)
/012/	Support subsidy for promoting investment in energy conservation
/013/	Explanatory materials related to the process of project evaluation and selection
/014/	Explanatory materials related to the total amount of funds raised and the plan for allocating funds to
	each project (including new projects and refinancing)
/015/	Explanatory material pertaining to documents that show how funds are managed
/016/	Explanatory material related to the concept of reporting
/017/	Syndicated loan agreement (draft)