

———— JCR Climate Transition Finance Evaluation By Japan Credit Rating Agency, Ltd. ————

Japan Credit Rating Agency, Ltd. (JCR) announces the following Climate Transition Finance Evaluation as follows.

## JCR Assigned Green 1 (T) (Final Evaluation) to Transition Loan Borrowed by Mitsui O.S.K. Lines

Subject	:	Mitsui O.S.K. Lines, Ltd. Transition Loan
Classification	:	Long-term loan
Lender	:	A syndicated loan group consists of Development Bank of Japan Inc., Sumitomo Mitsui Trust Bank, Limited, and Sumitomo Mitsui Banking Corporation as transition structuring agents
Execution amount	:	Undisclosed
Execution date	:	(1) September 2021 (scheduled) (2) September 2021 (scheduled)
Final repayment date	:	(1) Monthly application date (scheduled) 15 years after completion of LNG-fueled ferry (first vessel) (2) Monthly application date (scheduled) 15 years after completion of LNG-fueled ferry (second vessel)
Repayment method	:	Scheduled repayment
Use of funds	:	Funds for the construction of two new LNG-fueled coastal ferries

### <Evaluation Results of Climate Transition Finance>

Overall Evaluation	Green 1(T)
Green/Transition Evaluation (Use of Proceeds)	Gt1
Management, Operation and Transparency Evaluation	m1

## Chapter 1: Overview of Evaluations

### [Company Profile]

Mitsui O.S.K. Lines, Ltd. ("MOL" or the "Company") is a comprehensive marine transportation company with a long history founded in 1884. In 1999, then former MOL and Navix Line, Ltd. merged to form the current business. The Company has built one of the world's largest fleets with diverse fleet types centered on the transportation of dry cargo, such as iron ore and grain, by dry bulkers, and resource-energy transport, such as tankers and LNG carriers, and has many excellent customers both domestically and overseas. In addition to issuing Green Bonds in 2018 and Sustainability Bonds in 2019, MOL is actively working to procure funds through sustainability financing, including procurement through green loans. In fiscal year ended March 2021 (FY2020), the Company's and its consolidated subsidiaries' sales by business unit are as follows: Dry Bulk Business 22%, Energy and Offshore Transport Business Transport 28%, Product Transport Business 40%, and Associated Businesses 10%. Of the total 809-vessel fleet, vessel types are as follows: dry bulkers 39%, tankers 22%, LNG-carrier 14%, car carriers 12%, containerships 8%, others 6%.

### [Overview of Environmental Policy]

In June 2021, MOL became the first integrated shipping company in the world to announce its Environmental Vision 2.1, an environment strategy aiming at carbon neutrality in 2050.

### MOL Group Environmental Vision 2.1

For the next generation on board this planet, the MOL Group will work collaboratively with our partners and stakeholders with creativity to resolve environmental issues. We will continue to provide solutions for issues of high importance such as the preservation of the marine environment, protection of biodiversity and prevention of air pollution, and in order to tackle climate change with utmost urgency, the MOL Group will make a concerted effort to achieve net zero GHG emissions by 2050. With these contributions for the sustainable development of our society and the preservation of nature, from the blue oceans, we sustain people's lives and ensure a prosperous future.

<b>Climate Change Countermeasures</b>	<b>Preservation of marine environments</b>
<b>Protection of biodiversity</b>	<b>Prevention of Air Pollution</b>

### Medium- to long-term targets

① Deploy net zero emissions ocean-going vessels in the 2020s	② Reduce GHG emissions intensity by approximately 45% by 2035 (versus 2019*)
③ With the concerted effort throughout the Group, achieve net zero GHG emissions by 2050	

\* Intend to acquire certification in compliance with SBT guidance for marine transport

(Source: MOL Group Environmental Vision 2.1 Website)

MOL analyses risks in accordance with Task Force on Climate-related Financial Disclosures ("TCFDs") and uses them as the basis for calculating its GHG-reduction targets. In addition, it has established medium-and long-term targets assuming to be a SBT-certified company. Accordingly, JCR has evaluated this as an ambitious environmental target with scientific grounds.<sup>1</sup>

### [Overview of Evaluation Targets]

The subject of this evaluation is the funds for the construction of two LNG-fueled ferries, which are the first coastal vessels operated by Ferry Sunflower Limited ("Ferry Sunflower"), a subsidiary of MOL. This vessel is scheduled to go into the Osaka-Beppu route, which MOL started for the first time, which has a history of more than 100 years. For the characteristics of these vessels, since it is LNG-fueled, sulfur oxide emissions have been kept to almost zero. In addition, they have received the highest rating of five stars for its domestic energy efficiency rating, expecting to reduce CO<sub>2</sub> by

<sup>1</sup> Science Based Targets. Companies' greenhouse gas emission reduction targets consistent with the Paris Agreement.

more than 20% compared to the heavy oil-only incinerated ferries. Moreover, in order to promote decarbonization in the transport sector in the region through modal shift, the ferries try to expand the number of individual passengers by using the specifications that allow them to enjoy travel as casual cruises from the specifications as ferries for means of transport. From the viewpoint of improving the efficiency of freight transportation, the number of trucks can be loaded is expanding by almost 1.5 times compared to the current vessel. Based on the above, JCR evaluates that the use of proceeds contributes to the decarbonization of coastal shipping and the modal shift of target areas.

#### [Appropriateness of Transition Strategy and Contribution of the Vessels]

JCR confirmed that the Transition Loan has been properly established and disclosed (to be established) for all four elements required by the Transition Finance and the Basic Guidelines for Climate Transition Finance issued by the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment in the Climate Transition Finance Handbook ("CTFH") issued by the International Capital Markets Association ("ICMA") in December 2020.

#### [Management and Transparency of the Proceeds]

JCR confirmed that the standards for selecting the use of proceeds are appropriate as a climate transition financing that identifies the use of proceeds, and that relationship departments and management are appropriately involved in the selection process. The allocation plan, tracking management system and reporting of the proceeds are properly planned. Based on the above, JCR believes that the administrative and operational system for the fundraising through the Loan is appropriate and that transparency is ensured. Furthermore, regarding the organization's efforts for the environment, the top management positioned environmental issues as a high priority issue, and in Environmental Vision 2.1 formulated in June 2021, JCR confirmed that the Company had set out a goal of 2050 year carbon neutral in the marine transportation industry, which is still a few examples in the world, ahead of peers, and established a system and investment plans for realizing this goal. This indicates that the organization's environmental efforts are also innovative and ambitious, and that management's commitment is clear.

Based on the JCR Green Finance Evaluation Methods, JCR assigned "gt1" for the evaluation of "Green/Transition Evaluation (Use of Proceeds)", "m1" for the evaluation of "Management, Operation, and Transparency Evaluation." Consequently, JCR assigned "Green 1 (T)" for the overall evaluation of the "JCR Climate Transition Finance Evaluation" for the Transition Loan. Evaluation results are discussed in detail in the next chapter. The Loan is considered to meet the standards for items required by the "Green Loan Principles," "CTFH," "Basic Guidelines for Climate Transition Finance," and "Green Loan and Sustainability Linked Loan Guidelines."

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<sup>2</sup> LMA (Loan Market Association), APLMA (Asia Pacific Market Loan Association), LSTA (Loan Syndications and Trading Association) Green Loan Principle 2021 <https://www.lma.eu.com/>

<sup>3</sup> ICMA Climate Transition Finance Handbook <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/CTFH-December-2020-091220.pdf>

<sup>4</sup> Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment's Basic Guidelines for Climate Transition Finance (May 2021) <https://www.meti.go.jp/press/2021/05/20210507001/20210507001-1.pdf>

<sup>5</sup> Ministry of the Environment's Green Loan and Sustainability Link Loan Guidelines <http://www.env.go.jp/press/files/jp/113511.pdf>

## Chapter 2: Current Status of Target Projects in Each Evaluation Item and JCR Evaluation

### Evaluation Phase 1: Climate Transition Evaluation

Based on the current situation and JCR's evaluation, as detailed below, JCR assessed that 100% of the use of funds under the Loans is for Green Project and/or Environmental Improvement Effect Project (climate transition project) to be implemented during the transition phase to mitigate climate change, and evaluated Phase 1: Climate Transition Assessment at the highest level ("gt1").

### 1. JCR's Key Consideration in this factor

#### Matters to be confirmed in this section

- ✓ Can the proceeds be used for Green Projects with clear environmental improvement effects and/or for projects with environmental improvement effects to be implemented at the transition stage (Climate Transition Projects)?
- ✓ When a negative impact on the environment is anticipated in the use of proceeds, whether the impact is sufficiently examined by a specialized internal department or an external third-party organization, and necessary avoidance and mitigation measures are taken?

Does the borrowers meet the four elements prescribed by ICMA's CTFH?

- ✓ Are there consistency of financial uses with the Sustainable Development Goals ("SDGs")?

### 2. Current Situation of Evaluation Subjects and JCR Evaluation

#### 2-1. Outline of Use of Proceeds

Subject to appropriation	(1) Financing for construction of one LNG fueled ferry scheduled for completion in December 2022 (2) Financing for construction of one LNG fueled ferry scheduled for completion in March 2023
Vessel name	(1) Sunflower Kurenai (2) Sunflower Murasaki <sup>6</sup>
Shipping route	Osaka-Beppu Route
Vessel type	Ferry
Shipyards	Shimonoseki Shipyards of Mitsubishi Shipbuilding Co., Ltd.
Scheduled service Date	(1) End of December 2022 (scheduled) (2) End of March 2023 (scheduled)
Shipowner	Mitsui O.S.K. Lines, Ltd.
Operator	Ferry Sunflower Limited

[Main environmental performance]

- Nearly zero sulfur oxide emissions

<sup>6</sup> The Osaka/Beppu route in which the vessels are to be placed into service was opened in 1912 by Osaka Shosen Kaisha (current MOL). Along with successive vessels that inherited their names, the vessels that began operations in that route are called "The Queen of the Sea" or "The Queen of the Seto Inland Sea." The new vessels have inherited these historic names.

- Acquired highest evaluation 5 stars in "Energy Efficiency Rating System for Coastal Shipping" (a system that objectively evaluates the energy-saving and CO<sub>2</sub> saving performance of vessels of the Ministry of Land, Infrastructure, Transport and Tourism ("MLIT"). Evaluated at six grades from "no star" to "five stars" with the highest rating depending on how many percentage points improved from the standard value, and both vessels received the highest rating (for cutting more than 20% of CO<sub>2</sub> emissions compared to when heavy oil was used)
- Contributing to modal shift in Japan by boosting the volume of transportation through introduction of the ships (by increasing the number of trucks loaded), reducing the amount of CO<sub>2</sub> emitted when transporting one ton of cargo or one car for one mile, etc.)

(Comparison with current ships)

Ship name	Current ship Sunflower Ivory Sunflower Cobalt	New-building ship Sunflower Kurenai Sunflower Murasaki
Gross tonnage (ton)	9,245	17,300
Overall length/width (m)	153/25	199.9/28
Fuel	Heavy oil	Dual Fuel (LNG/ heavy oil)
Interior area (m <sup>2</sup> )	4,950	8,300
Passenger capacity (persons)	710	714
Percentage of individual rooms	80%	90%
Trucks (converted to 13 meters)	92	136
Passenger cars	97	100

(Source: Ferry Sunflower's Website)<sup>7</sup>

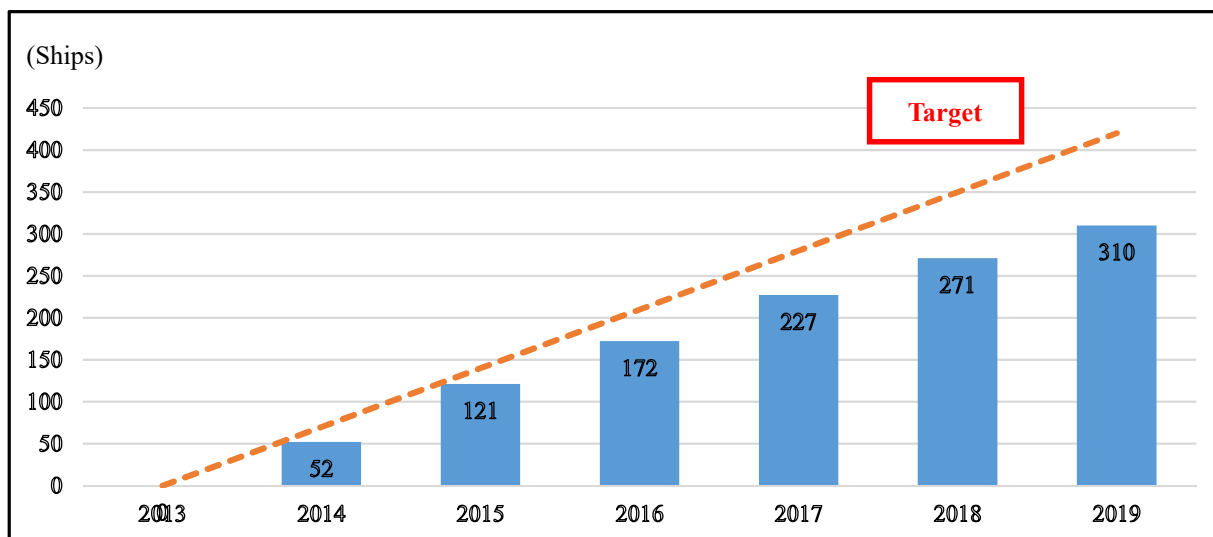
## 2-2. Environmental Improvement Effects of Projects and Positioning in the Long-Term Environmental Strategy (Transition Strategy)

**The funds procured from the loan will be allocated for fund the cost of building two LNG-fueled ferries. Compared to heavy oil-only ferries, these vessels reduce CO<sub>2</sub> emissions by more than 20%, supporting carbon neutral initiatives in coastal shipping, where initiatives are difficult to proceed. In addition, by increasing attractiveness through increasing passenger capacity and the number of trucks loaded, etc., the effect of encouraging modal shift from land transport is expected. Throughout its long-term strategy, MOL has been developing a variety of technologies, including the launch of zero-emission vessels during the 2020s and the examination of alternative technologies using carbon recycled methane and biomethane fuels with lower CO<sub>2</sub> emissions. The Company's strategy does not lock-in to LNG fuels. Moreover, switching to LNG-fueled vessels in order to achieve CO<sub>2</sub> emission reduction targets set forth in MOL's Environmental Vision 2.1 is one of the key measures for both domestic and overseas ocean shipping.**

<sup>7</sup> Ferry Sunflower website URL [https://www.ferry-sunflower.co.jp/news/article/2022\\_LNG\\_ferry\\_debut.html](https://www.ferry-sunflower.co.jp/news/article/2022_LNG_ferry_debut.html)(Japanese)  
Notification "Decision to commence new vessels waiting for Osaka/Beppu route!" Ferry Sunflower (ferry-sunflower.co.jp)

Positive Results 1: Carbon neutral initiatives in coastal shipping and the significance of launching the vessels

In the "Coastal Carbon Neutral Study Meeting" by the MLIT, the number of ships that contribute to energy saving is set at 70 per year and 1,190 in FY2030 as the measure evaluation index for the emission reduction target in the global warming countermeasure plan. The emission reduction target of 1.57 million t-CO<sub>2</sub> was set by multiplying the energy saving rate (16%) of these energy-saving vessels by the value of the average fuel consumption. However, although a cumulative total of 310 energy-saving vessels had introduced through fiscal 2019 (goal of 420 vessels), there is a situation in which a gap between the target and performance figures is emerging toward fiscal 2030.



(Source: JCR composing from a material the Coastal Carbon Neutral Study Meeting, MLIT)

The following are the reasons why the spread of energy-saving vessels does not proceed as targeted:

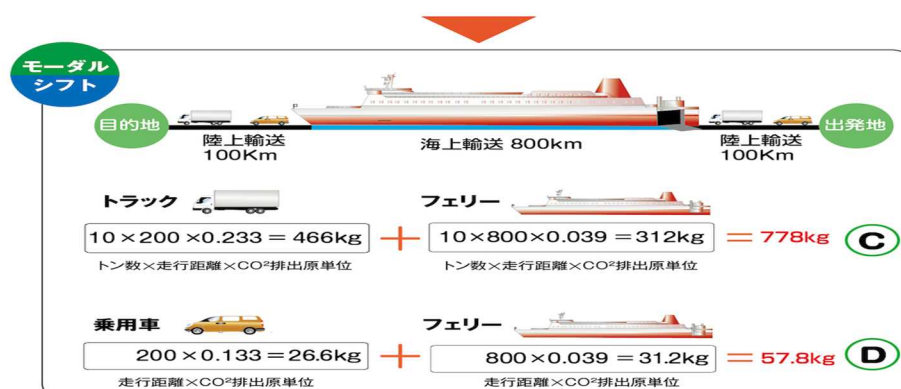
- A large number of ship owners attribute to small and medium-sized enterprises, and micro enterprises lack investment capacity
- Fuel costs are borne by operators, so there is little incentive for ship owners to decarbonize
- Transfer to vessels with high environmental performance is unlikely to occur due to the grouping of cargo owners and operators.

The two ferries to be used for this proceeds will be operated by MOL affiliate Ferry Sunflower, but in order to lighten the Company's balance sheet, they are owned by MOL. By thus reducing the burden on ship owners, MOL continues to support the introduction of low-carbon vessels in coastal operations.

Positive Results 2: Contribute to modal shift

According to the Japan Long Course Ferry Service Association ("JLCFSA"), the following calculations have been made on CO<sub>2</sub> reductions from modal shift, and combining marine transport has much less CO<sub>2</sub> emissions than land transport across all intervals.





(Source: JLCFSA website (Japanese); CO<sub>2</sub> emissions intensity in 2020)

Positive Results 3: Contribute to the Shipping Industry and the MOL Group's medium and long-term GHG reduction strategy

The use of proceeds is to contribute to the medium and long-term goals for GHG reductions set forth in the Environmental Vision 2.1 by the shipping industry and the MOL Group. A summary of the strategy is detailed in the consistency review section of the CTFH and the Basic Guidelines.

**From the above, the use of proceeds under the Loan falls under the "clean transportation" and "pollution prevention and control" in the "Green Loan Principles," and "clean transportation projects" and "pollution prevention and control" among the uses of proceeds exemplified in the "Green Loan and Sustainability Linked Loan Guidelines."**

### 2-3. Negative impact on the environment and others

(1) MOL has identified and addressed measures to avoid or mitigate negative impacts as follows.

[Assumed risks]

Greenhouse effect due to CO<sub>2</sub> discharged by LNG and heavy oil combustion and air pollution due to NOx

[Risk mitigation measures]

Measures to be taken in MOL's transition strategy include efforts for safety navigation and environmental impact reduction of vessels in operation using ICT, switching to next-generation fuels such as synthetic methane, and proactive efforts to introduce new technologies

JCR confirmed that appropriate consideration was given to the negative impacts on the environment.



(2) Potential lock-in to fossil fuels

Even though LNG is a relatively low CO<sub>2</sub> emissions fossil fuels, there has not yet been developed ship fuel technology to eliminate CO<sub>2</sub> emissions. MOL's transition strategy does not lock-in to fossil fuels because it plans as a path to decarbonization in the future as follows: 1) begin operating a net zero-emission ocean-going vessel in the 2020s, introduce about 90 LNG-fueled vessels in 2030, and 2) introduce about 110 net zero-emission ocean-going vessels by 2035

(3) Do No Significant Harm Assessment<sup>8</sup>

The use of the proceeds of the Loan may not significantly harm other Green Projects.

(4) Consideration for Just Transition

In the development of LNG carriers and other low-carbon vessels, there is currently no assumption that Just Transition will be required in these areas. In addition, this ship is ordered to a domestic shipyard, which can be said to contribute to the revitalization of the domestic shipbuilding industry.

2-4. Fulfillment of Matters Required in the CTFH

**Element 1: Borrower's Climate Transition Strategy and Governance**

(1) Whether the borrower that raises funds has a strategy for the transition for climate change mitigation or not.

[MOL Environmental Vision 2.1]

MOL Group Environmental Vision 2.1

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<b>Climate Change Countermeasures</b>	<b>Preservation of marine environments</b>
<b>Protection of biodiversity</b>	<b>Prevention of Air Pollution</b>

Medium- to long-term targets

① Deploy net zero emissions ocean-going vessels in the 2020s	② Reduce GHG emissions intensity by approximately 45% by 2035 (versus 2019*)
③ With the concerted effort throughout the Group, achieve net zero GHG emissions by 2050	

\* Intend to acquire certification in compliance with SBT guidance for marine transport

<sup>8</sup> To verify whether implementing the project will hinder other green-eligible projects (projects that contribute to climate change adaptation, pollution/contamination prevention, clean water and ocean conservation, recycling-oriented economies, energy conservation, and the protection of the ecosystem).



Strategy	Major efforts
<p>Strategy 1/ <b>Adoption of Clean Alternative Fuels</b></p>	<ul style="list-style-type: none"> <li>● Regarding the fuel composition, in the 2020s, various candidate fuels, including next-generation fuels such as ammonia, will be examined from now, while the LNG fuel which is practicable at present is the main.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>[Major milestones]</p> <ul style="list-style-type: none"> <li>- During the 2020s: Start of operation of net zero emission international vessels</li> <li>- 2030: Approx. 90 LNG-fueled carriers (Car carriers / large Cape Carriers, etc. (excluding LNG bunkering vessels))</li> <li>- 2035: Approximately 110 vessels net-zero-emissions international vessels (Synthetic methane, ammonia, hydrogen fuels, bio-diesel use, etc.)</li> </ul> </div> <ul style="list-style-type: none"> <li>● <u>Through the above, we aim to reduce emissions intensity by approximately 45% in 2035 (compared to 2019, and plan to acquire SBT certification).</u></li> </ul>
<p>Strategy 2/ <b>Enhancement of Energy-Saving Technologies</b></p>	<ul style="list-style-type: none"> <li>● As well as further advancing the introduction of the environment-friendly technologies we have developed to date, we will boldly tackle the introduction of innovative energy-saving technologies (e.g., Wind Challenger Project, propeller-equipped efficiency improvement equipment, etc.).</li> </ul>
<p>Strategy 3/ <b>Boost Operating Efficiency</b></p>	<ul style="list-style-type: none"> <li>● Pursue reductions in GHG emissions by reducing fuel consumption on ships through improvement of operation efficiency.</li> <li>● In order to streamline and optimize operations, not only utilizing ship big data through FOCUS Project, but also form expert teams and cross-company project teams to boost operating efficiency, reduce fuel consumption, respond to regulations, build intelligence, etc.</li> </ul>
<p>Strategy 4/ <b>Building Business Models to Enable Net Zero GHG Emissions</b></p>	<ul style="list-style-type: none"> <li>● MOL is building business models to enable net zero GHG emissions by being actively involved in regulation and rule-making through industry associations and related government agencies. Further, we are developing negative emissions projects and examining carbon offset technologies and methodologies.</li> </ul>
<p>Strategy 5/ <b>Expanding Low-Carbon and Decarbonization Projects through Use of the MOL Group's Concentrated Strengths</b></p>	<ul style="list-style-type: none"> <li>● Responding to and leveraging the global shift in energy sources, we aim to realize a “Green Ocean Shift” and contribute to clean energy supply chains from upstream to downstream.</li> <li>● Leveraging our accumulated knowledge, it will contribute to the decarbonization of society as a whole by increasing the value of the clean energy supply chain. (e.g., developing offshore wind power-related businesses and working to establish a joint development and supply system for next-generation fuels such as ammonia, hydrogen, synthetic</li> </ul>

	methane, etc.)
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[Overview of GHG Emission Reduction Strategies Published by IMO)]<sup>9</sup>

In April 2018, the IMO's 72nd Marine Environmental Protection Commission ("MEPC72") formulated the following medium-and long-term targets for GHG reductions with 2008 as the base year.

- 1) Reduce CO<sub>2</sub> emissions per transport work, as an average across international shipping, by at least 40% by 2030
- 2) Reduce the total annual GHG emissions by at least 50% by 2050
- 3) Reducing GHG emissions from international shipping to phase them out as soon as possible in this century

Improvement targets for 2030 have been established based on analyses of scientific feasibility, including from analyses of technological feasibility and the effectiveness of EEDI regulations. This reflects the results of the following proposals from Japan in the IMO's discussion.

- A combination of 17% improvement in efficiency due to improved fuel efficiency of newly built vessels through EEDI controls and 28% improvement in efficiency due to improved operations such as slowdown operations and route optimization ( $0.83 \times 0.72 = 0.60$ )<sup>11</sup>

Global warming countermeasures are discussed in the United Nations Framework Convention on Climate Change ("UNFCCC"). Regarding countermeasures against GHG emissions from international shipping activities that transcend national boundaries, it is difficult to distinguish between ship nationalities and countries in operation, and they do not fall within the framework of country-specific measures to reduce global warming in UNFCCC, and therefore their deliberation is entrusted to IMOs, which are specialized agencies of the United Nations.

[Positioning in the Roadmap for Zero Emissions in International Shipping Announced in Japan]

Vessels fueled by LNG cannot be said to be a completely clean means of transport because they use fossil fuels. However, as the CO<sub>2</sub> emissions of LNG-fueled vessels that are currently available are 25-30% less than those of ships that use conventional heavy oils, they are the currently lowest in CO<sub>2</sub> emissions. In the long term, there are alternative fuels and technologies that can be expected to result in the introduction of physical vessels achieving more than 90% efficiency improvements compared to 2008, such as hydrogen fuels, ammonia fuels, carbon recycled methane, biomethane fuels, and on-board CO<sub>2</sub> capture equipment. However, LNG fuel vessels can replace their infrastructure with carbon recycled methane and biomethane fuels in the future. In addition, it is considered that LNG-fueled vessels can be used as vessels contributing to zero emissions at a certain rate from 2050 onwards by considering the on-board CO<sub>2</sub> capture.

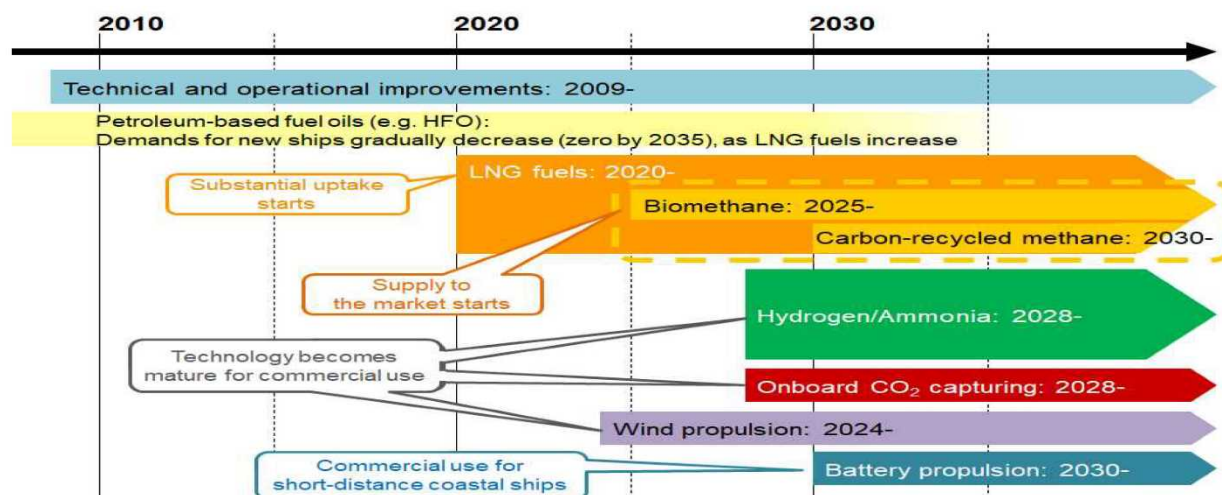
The International Shipping GHG Zero Emissions Project published the "Roadmap for Zero Emissions in International Shipping" in March 2020, identifying key technologies and alternative fuel options for GHG reductions, and developing the following GHG reduction scenarios while considering the timing of their practical application. This Roadmap combines a number of technologies and elements, such as fuel, speed, designs, and CO<sub>2</sub> capture, and considers specific responses and measures based on estimates of the volume of marine transportation by vessel kind and type up to 2050 (for tankers and liquefied gas carriers, calculation is based on onshore oil and gas usage forecasts under a climate change forecast scenario (RCP4.5), and for other vessels it is based on economic growth forecasts, etc.). In this scenario, as of 2021, MOL's medium and long-term vision is in line with the direction of the Roadmap, which aims to reduce CO<sub>2</sub> mainly

<sup>9</sup> IMO is a specialized organization of the United Nations established in 1958 to promote intergovernmental cooperation on various issues in the maritime field, such as maritime safety and prevention of marine pollution from vessels. As of June 2018, 177 countries and regions are participating.

<sup>10</sup> Announced in April 2018. Initial IMO Strategy on Reduction of GHG Emissions from SHIPS (MEPC resolution MEPC. 304 (72))

<sup>11</sup> IMO Strategy for Reducing Greenhouse Gases (GHGs) Emitted by MLIT Vessels. <https://www.mlit.go.jp/common/001250101.pdf>

by LNG fuel, and at the same time, to develop lower-carbon alternative fuels by 2028 and reduce carbon emissions through technological conversion such as wind power promotion.<sup>12</sup>

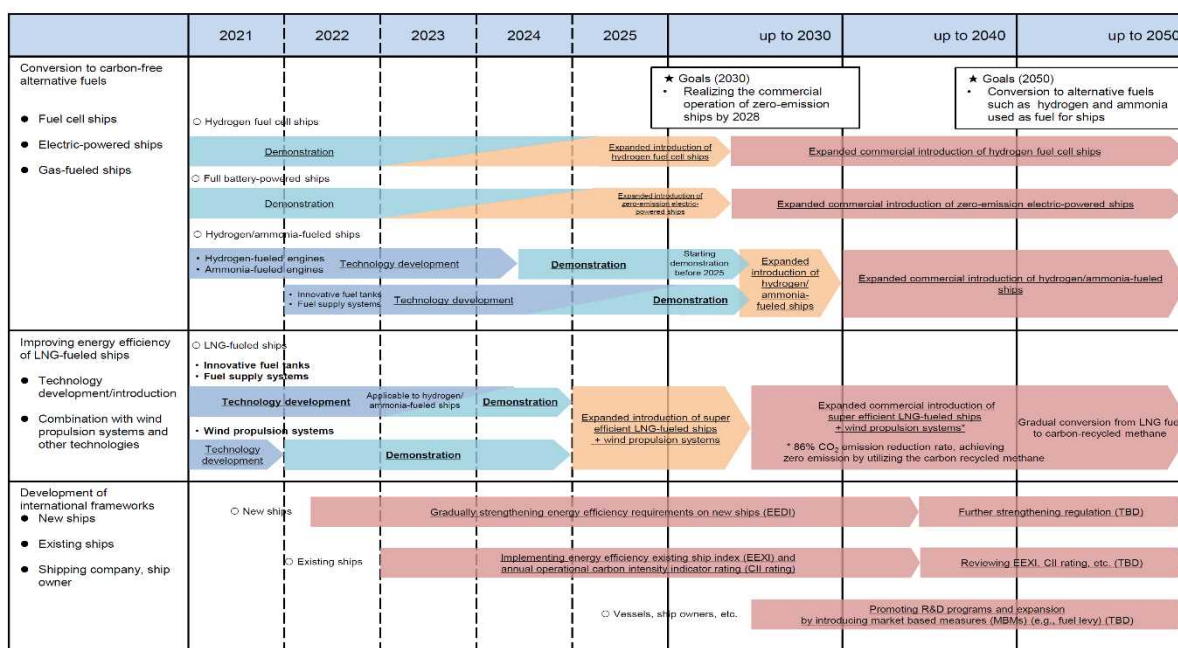


[Roadmap of Ships in Green Growth Strategy for Carbon Neutral]

In October 2020, Japan declared "Carbon Neutrality by 2050." To realize this, the Ministry of Economy, Trade and Industry collaborated with related ministries and agencies to formulate the "Green Growth Strategy through Achieving Carbon Neutrality in 2050 (the "Green Growth Strategy"). This strategy is an industrial policy to link the challenge of "Carbon Neutrality by 2050" to "positive cycle of economic growth and environmental protection." In this context, for the ship industry, it is aiming to acquire technological capabilities related to the development of gas fuels such as LNG, hydrogen, ammonia, etc., which are essential for achieving zero emissions, and also to lead the development of international standards, to strengthen the international competitiveness of Japan's shipbuilding and shipping industries, and to work toward carbon neutrality in marine transportation. The "time schedule" up to 2050 presented in the Green Growth Strategy consists of the following three main measures: (1) conversion to carbon-free alternative fuels, (2) higher efficiency of LNG fuel vessels, and (3) development of an international framework.

The construction of MOL's LNG fuel vessel is also a consistent effort with the time schedule of this green growth strategy.

<sup>12</sup> The International Shipping GHG Zero Emissions Project was launched by the MLIT in collaboration with Japanese industry, academia, government and public agencies. This project comprehensively examines the technological development issues necessary to further enhance Japan's competitive advantage and the ideal form of international standards and incentive systems based on the impact on the market, while assessing the future trends of the world in the fields of energy conservation and decarbonization, etc., compiles the division of roles and work plans of the parties concerned to strategically promote them, and maneuvers the establishment of a new international framework. It also aims to further develop energy conservation and environmental technologies, which are the strengths of Japan's marine industry. In this project, a roadmap for the zero emission of the international shipping was decided in March, 2020. The roadmap is working to develop necessary international rules and promote technological development and verifications. It also aims to commercially operate the ultimate "zero-emission vessels" that do not emit greenhouse gases by 2028.



(Source: "Green Growth Strategy Associated with 2050 Carbon Neutral" Time Schedule for the Ship Industry)

- (2) The purpose of using the "Transition" label in procuring funds to contribute to the realization of corporate strategies for Issuer, etc. to move to a business model that can effectively address climate change-related risks and contribute to the achievement of the goals of the Paris Agreement.

A strategy mentioned above for reducing CO<sub>2</sub> based on the results of risk scenario-analysis in accordance with TCFD guidance is a key strategy for the Company to shift its business model.

- (3) The governance system established to ensure the effectiveness of the transition strategy.

MOL has established a governance system to ensure the effectiveness of its transition strategy as follows.

- The Environment & Sustainability Committee (former the Environment Management Committee), chaired by the Chief Environment Sustainability Officer, has been established to promote its environment strategy and oversee the strategic planning and implementation of measures aimed at contributing to SDGs through its business.

[Promotion System]



(Source: MOL Environmental Vision 2.1 Briefing Materials)

- The Environmental & Sustainability Committee regularly monitors the status of responses to the risks and opportunities of climate change through TCFD scenario-analyses, confirms the impact on its business from a long-term perspective, formulates medium and long-term environmental targets, and also bears responsibility for the status of their achievement and the promotion of environmental and emission-free businesses.

- In April 2021, with the Environment & Sustainability Strategy Division newly established, a cross-divisional project team has been formed to promote low-carbon and decarbonization business development.

### Element 2: Business Model Environmental Materiality

According to IMO, CO<sub>2</sub> emissions from the shipping industry amounted to approximately 800 million tons, or 2.2% of the global total, as of 2012. International shipping is an essential business category in which IMO plays a central role in working to prevent pollution, such as decarbonization strategy. 100% of MOL's business segments are marine transportation related to dry bulks, energy resources and product logistics. In its core businesses, efforts to decarbonization in vessels are positioned as an important issue. MOL has set forth in its materiality Marine and Global Environmental Preservation, and Innovation for Development in Marine Technology. Based on this, MOL formulated Environmental Vision 2.1.



(Source; Briefing Material from Environmental Vision 2.1)

### Element 3: Climate Transition Strategy to be Science-based Including Targets and Pathways

Transition roadmap should meet the following requirements.

- (1) Quantitatively measurable, covering SCOPE1 and 2 (it is desirable that SCOPE 3 be targeted to the extent feasible)

MOL measures CO<sub>2</sub> emissions and obtains third-party certification. Target figures include SCOPE 1 and some of SCOPE 3. Since SCOPE 2 is very small, it is not subject to this target setting, and efforts are being made to conserve energy and introduce clean energy separately. Although it is still difficult for SCOPE 3 to determine all figures, it meets the main items and plans to make further efforts to grasp the actual situation with the cooperation of stakeholders going forward.



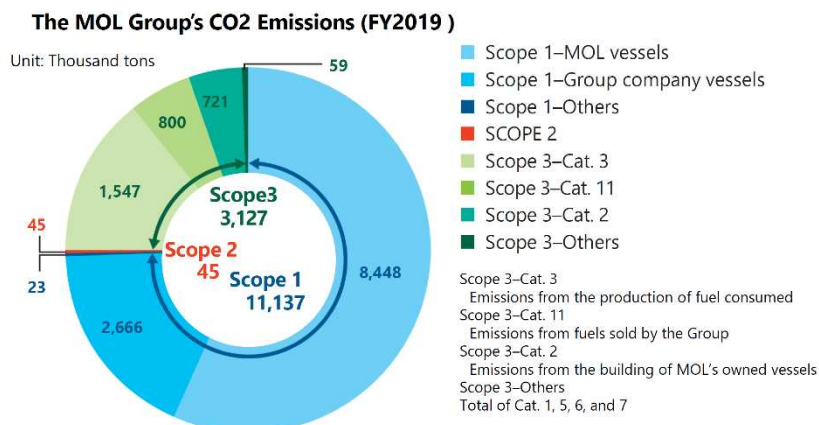
## Current Environmental Impact and Organizational Structure for Promotion

FY2019  
CO2 emissions (Scope 1 + 2 + 3)\*1  
**14,309 thousand tons**

FY2019  
GHG emissions intensity\*2  
**10.86g CO2e/ton-mile**

\*1 This does not include emissions from Ocean Network Express Pte. Ltd. (ONE), a containership business in which three Japanese shipping companies have ownership interests.

\*2 This is GHG emissions per unit load (ton-mile) and includes not only emissions from the combustion process of fuels used by vessels but also emissions from the production processes of said fuels (in accordance with SBT standards, an international initiative aimed at reducing GHG emissions).

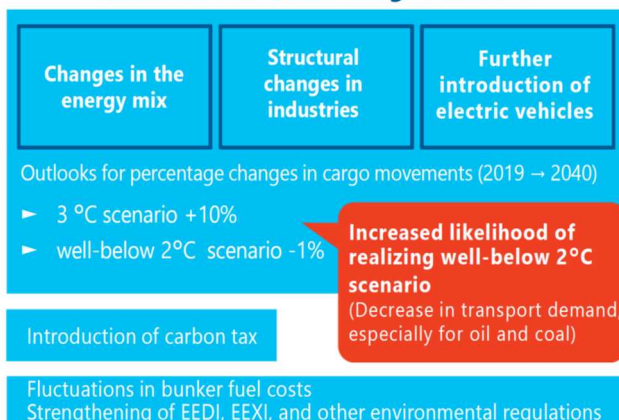


(Source: MOL Group Environmental Vision 2.1 Briefing Materials)

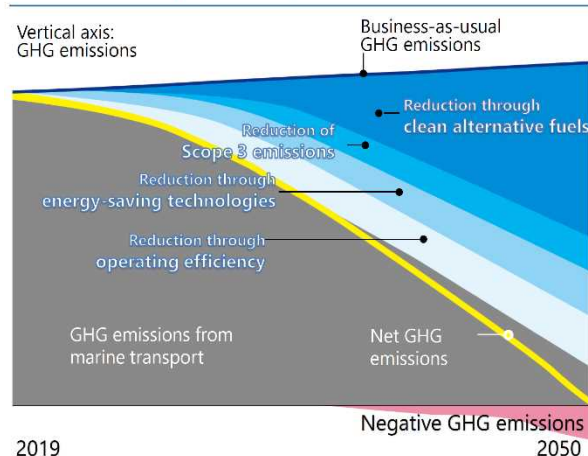
- (2) Consistent with targeting based on generally accepted scientific evidence

MOL's Transition Strategy is based on risk scenario analyses performed in accordance with TCFD guidance, assuming that it will contribute to the 2°C goal of the Paris Agreement. In addition, targets are set in accordance with the SBT Shipping Guidance, which is currently being drafted, and the Company plans to acquire SBT certification in the timing of when the guidance becomes the final version.

### Fluctuation in ocean freight demand



### The MOL Group's Pathway to Net Zero GHG Emissions



(Source: MOL Group Environmental Vision 2.1 Briefing Materials)

- (3) Publication of Transition Strategy (including midpoint milestones)

MOL announced its Environmental Vision 2.1. It includes the mid-point 2035 milestone.

- (4) Certification and verification by an independent third party

MOL has obtained third-party certification for actual CO<sub>2</sub> emissions.

## Element 4: Implementation Transparency

MOL has announced future investment plans and milestones for 2030 as follows, which is highly transparent. Although it is not described in the milestone below, the construction of a pure battery tanker (EV tanker) powered by the world's first high-capacity lithium-ion battery, led by the e5 Lab Inc. funded by MOL, is scheduled to be completed in 2022 as a ship fuel supply vessel in Tokyo Bay. Large bulk ocean-going vessels are also considered as a type of the zero emission vessels in the medium and long term.

Unit: Billion yen		
	Investment	Expected return (Contribution to FY2027 ordinary profit)
<b>Investment in the low-carbon and decarbonization fields</b>	<b>205</b>	<b>21</b>
(1) Reduction of the Group's GHG emissions	91	-
(2) Contribution to the reduction of society's GHG emissions	114	-

Milestones	
During the 2020s	<b>Deploy net zero emissions ocean-going vessels</b>
2030	<b>Approximately 90 LNG-fueled vessels*2</b>
2035	<b>Approximately 45% reduction in emissions intensity (Versus 2019, plan to acquire SBT certification) Approximately 110 net zero emissions ocean-going vessels (Use of synthetic methane, ammonia, hydrogen fuel, biodiesel, etc.)</b>

<p><b>Examples of initiatives to Reduce the Group's GHG emissions</b></p> <ul style="list-style-type: none"> <li>● Promotion of LNG fuel vessels</li> <li>● Equipping of vessels with Wind Challenger systems</li> <li>● Adoption of clean alternative fuels for vessels               <ul style="list-style-type: none"> <li>- Biodiesel</li> <li>- Ammonia</li> <li>- Hydrogen</li> <li>- Synthetic methane</li> </ul> </li> </ul>	<p><b>Examples of initiatives to reduce society's GHG emissions</b></p> <ul style="list-style-type: none"> <li>● LNG-related projects in emerging countries</li> <li>● Projects related to offshore wind power farms</li> <li>● Supply, storage, and transport of clean alternative fuels               <ul style="list-style-type: none"> <li>- Biomass fuel</li> <li>- Ammonia</li> <li>- Hydrogen</li> </ul> </li> <li>● Development of negative GHG emissions projects</li> </ul>
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(Source: MOL Group Environmental Vision 2.1 Briefing Materials)

Based on the above, JCR has evaluated that the Loan satisfies the four elements required by the CTFH.

## 2-5. Consistency with SDGs

JCR has evaluated that the use of proceeds of the Loan will contribute to the following SDGs goals and targets, with reference to the International Capital Markets Association's (ICMA) SDGs mapping.



### Goal 3: Ensure healthy lives and promote well-being for all at all ages

**Target 3.9** By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination



### Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

**Target 7.3** By 2030, double the global rate of improvement in energy efficiency



### Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

**Target 9.4** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities



### Goal 13: Take urgent action to combat climate change and its impacts

**Target 13.3:** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning





**Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

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**Target 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution**

## Evaluation Phase 2: Management, Operation and Transparency Evaluation

JCR assigns "m1", the highest rating on JCR evaluation Phase 2: Management, Operation and Transparency Evaluation.

Rationale: The project has allocated the funding and implemented the businesses as planned through a firmly equipped management and operation system and high transparency as described below.

1. Appropriateness and Transparency concerning selection standard and processes of the use of proceeds.

### 1-1. JCR's Key Consideration in this factor

In this section, JCR confirms that the objectives to be achieved through the green/Transition Projects, the criteria for selecting green projects, the appropriateness of the process, and the series of processes are appropriately disclosed to lenders.

### 1-2. Current Situation of Evaluation Targets and JCR Evaluation

#### (1) Goal

The MOL Group aims to develop the world economy and contribute to society as a comprehensive transportation group under the Corporate Mission of "From the blue oceans, we sustain people's lives and ensure a prosperous future."

In addition, for more than 130 years since its foundation, the Company has continued to grow into one of the world's largest comprehensive marine transportation company by anticipating customer needs and the demands of the times with "an insatiable spirit of challenge."

#### MOL Group Corporate Mission

**From the blue oceans, we sustain people's lives and ensure a prosperous future.**

#### MOL Group Values: MOL CHARTS

##### Challenge

###### Innovate through insight

- Proactively develop business opportunities by staying ahead of the curve.
- Make innovation for the further growth of the company.

##### Honesty

###### Do the right thing

- Keep compliance as a Top Priority.
- Ensure that actions comply with social norms and the highest ethical standards.

##### Accountability

###### Commit to acting with a sense of ownership

- Tackle tasks with a sense of ownership and in cooperation with stakeholders.

##### Reliability

###### Gain the trust of stakeholders

- See things from the customers' perspective, and deliver service that exceeds their expectations.

- Seize the initiative in social issues and take responsibility for your behavior.

## Teamwork

### Build a strong team

- Encourage open communication with mutual respect.
- Share knowledge, experience, expertise and skills, and foster the next generation.

## Safety

### Pursue the world's highest level of safety culture

- Maintain a safety-first attitude and strive to reinforce safety awareness
- Return to basics by comprehending workplace safety.

JCR confirmed that the current use of proceeds is one of the important measures for achieving the 2035 interim milestones set forth in "Environmental Vision 2.1," and that this is consistent with MOL's Group Vision and Code of Conduct.

## (2) Selection criteria

MOL has established the following eligibility criteria in the Transition Loan Framework.

Projects to be funded can be expected to operate soundly, subject to risk verification in light of our examination criteria, and meet the following eligibility criteria.

- (1) Expect Reduction of environmental load by conversion to LNG fuel through the vessels. More specifically, 20% or more of CO<sub>2</sub> emissions, reduces the amount of CO<sub>2</sub> emissions (due to an increase in the number of trucks loaded, etc.) when one ton of cargo or one car is transported one mile, in addition to almost no sulfur oxide emissions.
- (2) Acquired the highest rating of five stars in the Energy Efficiency Rating System for Coastal Shipping in recognition of its outstanding environmental performance
- (3) Adopted for the "Demonstration Project for Improving the Operational Efficiency of Coastal Vessels (Demonstration Project for Comprehensive Efficiency Measures of Coastal Vessels)" jointly sponsored the METI and the MLIT in FY2019, which contributes to the carbon decarbonization strategy in Japan.
- (4) Contribute to modal shift in Japan by increasing the volume of transportation through the launch of the vessels

JCR considers the selection criteria to be appropriate because of the establishment of quantitative environmental improvement effects and the clear positioning of MOL in its long-term decarbonization strategy.

### (3) Process

1. Criteria and Participants for Project Selection
  - Based on environmental sustainability targets, including Environmental Vision 2.1, projects eligible for funding are selected through appropriate processes in accordance with established criteria.
  - MOL's Corporate Planning Division, Environment & Sustainability Strategy Division, Technology Innovation Unit, departments in charge of the subject project, and Finance Division are involved in the selection process.
2. Project selection process
  - The following processes have been adopted in the selection of the project.
    - (1) MOL's Finance Division selects projects based on the above selection criteria
    - (2) MOL's Environment & Sustainability Strategy Division verifies the appropriateness and qualification of green projects selected based on the Environmental Strategy (Environmental Vision 2.1).
    - (3) The CFO make Final approval of the selected project

JCR evaluates that relevant departments are appropriately involved in the project selection process and that final decisions are properly made.

JCR has evaluated that transparency is ensured for lenders, etc., as disclosing the goals, selection criteria and process related to the Loan to lenders in the Transition Loan Framework and it is scheduled to be released through this report.

## 2. Appropriateness and Transparency of management of the proceeds

### 2-1. JCR's Key Consideration in this factor

It is generally assumed that the management method of the proceeds varies by the issuer. JCR assesses whether proceeds procured through the Loans are appropriated to the Green/Transition projects and whether a mechanism and internal system are in place to enable easy tracking and management of the appropriation of proceeds.

JCR also attaches importance to evaluating the management and operation of the unallocated proceeds as well as to confirming that the proceeds procured from the Loan will be allocated to the Green/Transition projects at early stage.

### 2-2. Current Situation of Evaluation Targets and JCR Evaluation

MOL plans to use the Loan to pay for the construction of two LNG-fueled ferries.

- (1) Proceeds will be deposited into MOL's syndicated account in accordance with an loan agreement. ( The First Team, Corporate Finance Department, Sumitomo Mitsui Trust Bank Limited is in charge of it as agent)
- (2) The proceeds will be transferred to the account on the invoice issued by the shipyard based on a shipbuilding agreement between MOL and the shipyard. (Ship Finance Team, Financial Department, MOL is in charge of it)
- (3) For the equipment fund loan related to the project, approval of the management meeting will be obtained after prior deliberation by investment committee in accordance with the internal approval criteria. The approval is also subject to external audit.
- (4) Funds raised under the shipbuilding agreement will be promptly used to fund the construction of the vessels and, therefore, no unappropriated funds are accrued.
- (5) If the vessels will be sold or abandoned before the loan maturity date, prepayment will be made as unused funds.

From the above, JCR has evaluated that the fund management related to the Loan is appropriate and transparent because the appropriation plan of the proceeds from the Loan is properly formulated and the funds will be certainly appropriated to the Green/Transition Project under it, the tracking and management of the appropriated status and its internal control are properly implemented, and no unappropriated funds will occur.

### 3. Reporting

#### 3-1. JCR's Key Consideration in this factor

This section evaluated whether the disclosure system for lenders, etc. before and after the procurement of the Loan is planned in detail and in an effective manner.

#### 3-2. Current Situation of Evaluation Targets and JCR Evaluation

##### (1) Reporting on the status of appropriation of the proceeds

The use of the proceeds from the Loan is scheduled to be reported to the Lender annually for the remaining term of the Loan until all of the proceeds have been used to finance eligible projects. MOL also expects to prepay the funds if it sells or loses the vessels before it becomes due.

##### (2) Reporting on Effectiveness of Environment Improvements

- MOL will publish the report the environment improvement on the Integrated Report (or on MOL's website) annually.
  - CO<sub>2</sub> savings based on Environmental Vision 2.1
- MOL will report to lenders through a transition structuring agent annually.
  - CO<sub>2</sub> emissions on the vessels (mt/vessel/year)
  - Reduced CO<sub>2</sub> emissions (%) compared to heavy oil
  - Reduction in NOx emissions compared to heavy oil (%)
  - Reduction in SOx emissions compared to heavy oil (%)

JCR evaluates the appropriation of proceeds and the reporting of environment improvement effects to be properly disclosed to lenders, etc.

## 4. Organizational Efforts for the Environment

### 4-1. JCR's Key Consideration in this Factors

This section assesses whether the borrower's management considers environmental issues to be of high priority in management, whether the transition finance procurement policy and process, criteria for selecting Green/Transition Projects, etc. are clearly positioned by establishing a department that specializes in the environmental field or through collaboration with external organizations, etc.

### 4-2. Current Situation of Evaluation Targets and JCR Evaluation

As a comprehensive logistics corporate group centered on the shipping industry, the MOL Group has positioned environment strategy as a top priority in its management plan, and is strengthening its efforts from an environment perspective in its portfolio and sales strategies as well. MOL plans to invest about JPY 200 billion in the low/decarbonization field over the three years from 2021-23, with a particular view to strengthening its environment perspective on the three cores of its environment strategy.



(Source: New MOL Corporate Mission / MOL Group Vision and Outline of Rolling Plan 2021)

The three main environmental initiatives outlined in the Rolling Plan 2021 announced in April 2021 are as follows:

- Environmental Strategy: Revise the Environmental Vision 2.0 to 2.1 and accelerate initiatives
  - Move up the net GHG emission zero schedule (by 2050)
  - Develop a GHG reduction roadmap
  - Introduce internal carbon pricing
  - Promote alternative fuel, operational efficiency, energy conservation
- Portfolio Strategy: Expand "low environmental impact" and "low carbon" businesses
  - Taking in increasing LNG demand (LNG carriers, FSRUs, powerships)
  - Enter offshore wind power business
- Business strategy : Develop services that visualize the environmental impact and reduction effects
  - Disclose carbon footprint in anticipation of customer needs and develop systems and data to enable that disclosure
  - Improve operational efficiency and visualize how much it contributes to GHG emission reduction

MOL also emphasizes resolving environmental issues other than climate change. One is prevention of air pollution by emission measures of SO<sub>x</sub> and NO<sub>x</sub>, and the other is biodiversity protection by measures against ballast water



regulation. In addition, from the viewpoint of marine environment conservation, the following efforts are carried out: ship recycling, waste, distribution, proper management of bilge (wastewater including oil, etc.) and recovery survey of marine microplastics. In August 2020, chartered ship "WAKASHIO" grounded and contaminated water off the coast of Mauritius. MOL dispatched personnel, worked to restore the natural environment, and conducted social contribution activities in cooperation with local NGOs in Mauritius. In response to this accident, the Company is reviewing its systems for preventing recurrence and for internal operations and developing a system for monitoring grounding risks.

MOL obtains third-party certification when announcing the results of its own CO<sub>2</sub> reductions. MOL seeks and verifies the views of external environmental experts from multiple perspectives, as shown by obtaining CDP scores for general disclosures, including environmental policies, systems, risks and opportunistic analyses, in addition to considering the risk analyses of marine transport guidance and TCFD guidance that Science Based Target Initiative is formulating regarding medium-term targets for reducing CO<sub>2</sub> emissions, which are the core of its environmental targets. From the viewpoint of new low carbon technology development, for example, in EV vessel development, a consortium has been actively promoted in collaboration with other industries, such as the establishment of e5 consortiums in collaboration with Asahi Tanker Co., Ltd., Idemitsu Kosan Co., Ltd., Exeno Yamamizu Corporation, Tokio Marine & Nichido Fire Insurance Co., Ltd., TEPCO Energy Partner, Incorporated and Mitsubishi Corporation.

JCR has evaluated that MOL's management positions environmental issues as a high priority for the group, as well as clearly positioning the transition loan procurement policy and process and the criteria for selecting Green/Transition Projects through establishment of departments that specialize in the environmental field or through collaboration with external organizations.

■Result of evaluation

Based on the JCR Green Finance Evaluation Methodology, JCR assigned "gt1" for the "Green/Transition Evaluation" and "m1" for the "Management, Operation, and Transparency Evaluation." Consequently, JCR assigned "Green 1(T)" for the "JCR Climate Transition Finance Evaluation" of the Loan. The Loans are considered to meet the standards for items required by the Green Loan Principles, the CTFH and the Green Loan and Sustainability Linked Loan Guidelines.

**[JCR Climate Transition Finance Evaluation Matrix]**

		Management, Operation, and Transparency Evaluation				
		m1	m2	m3	m4	m5
Green/Transition Evaluation	Gt1	Green 1(T)	Green 2(T)	Green 3 (T)	Green 4 (T)	Green 5 (T)
	Gt2	Green 2(T)	Green 2(T)	Green 3 (T)	Green 4 (T)	Green 5 (T)
	Gt3	Green 3 (T)	Green 3 (T)	Green 4 (T)	Green 5 (T)	Not qualified
	Gt4	Green 4 (T)	Green 4 (T)	Green 5 (T)	Not qualified	Not qualified
	Gt5	Green 5 (T)	Green 5 (T)	Not qualified	Not qualified	Not qualified

■Subject to evaluation

Borrower: Mitsui O.S.K. Lines, Ltd. (Security code: 9104)

[New]

Subject	Execution amount	Execution date	Final repayment date	Evaluation
Long-term loan	Undisclosed	(1) September 2021 (scheduled) (2) September 2021 (scheduled)	(1) Monthly application date (scheduled) 15 years after completion of LNG fuel ferry (first vessel) (2) Monthly application date (scheduled) 15 years after completion of LNG fuel ferry (second vessel)	JCR Climate Transition Finance Assessment: Green 1 (T) Green/Transition Assessment: gt1 Management, operation and transparency evaluation: m1

(Responsible analysts for this evaluation) Atsuko Kajiwara and Kosuke Kajiwara

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## Important explanation of the Climate Transition Finance evaluation

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### 1. Assumptions, Significance, and Limitations of JCR Climate Transition Finance Evaluation

JCR Climate Transition Finance Evaluation, which is assigned and provided by the Japan Credit Rating Agency (JCR), represents JCR's overall opinion at the present time as to the extent to which funds procured from the Transition Financing, which are subject to evaluation, are appropriated for the Green/Transition Projects as defined by JCR, and the extent to which JCR's efforts to manage, operate and ensure transparency of such Transition Financing, etc., and does not fully represent the extent of management, operations and transparency efforts related to the appropriation of funds procured from the Transition Financing and the use of funds, etc.

JCR Climate Transition Finance evaluation evaluates plans or circumstances, such as the appropriation of funds at the time of funding plans or at the time of funding of the Transition Financing, and there is no guarantee that funds will be appropriated or otherwise in the future. In addition, JCR Climate Transition Finance Evaluation does not demonstrate the effect of Transition Finance on the environment and is not responsible for its effect on the environment. JCR confirms that the effects of the funds procured from transition Finance on the environment are measured quantitatively and qualitatively by the borrower or by a third party requested by the borrower, but in principle it does not directly measure the effects.

### 2. Methods used in the conduct of this evaluation

The methods used in this evaluation are listed on JCR website (Sustainable Finance & ESG in <https://www.jcr.co.jp/en>) as JCR Green Finance Evaluation Methodology.

### 3. Relationship with Acts Related to Credit Rating Business

JCR Climate Transition Finance Evaluation is determined and provided by JCR as an ancillary business, which is different from the activities related to the credit rating business.

### 4. Relationship with Credit Ratings

The Evaluation differs from credit ratings and does not promise to provide or make available for inspection a predetermined credit rating.

### 5. Third Party character of JCR

There is no conflict of interest related to capital or human resources relationships between the subject of this evaluation and JCR.

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## Disclaimers

The information contained in this document has been obtained by JCR from the Borrower and from accurate and reliable sources. Provided, however, that such information may be erroneous due to human, mechanical or other reasons. Accordingly, JCR makes no representation or warranty, express or implied, as to the accuracy, results, accuracy, timeliness, completeness, marketability, or fitness for a particular purpose of such information, and JCR assumes no responsibility for any error, omission, or result of using such information. In no event shall JCR be liable for any special, indirect, incidental or consequential damages of any kind, including opportunity loss, monetary loss, which may arise from any use of such information, whether contractual, tort, negligence or other cause of liability, and whether or not such damages are foreseeable or unforeseeable. The JCR Climate Transition Finance Evaluation does not express an opinion on various risks (credit risk, price fluctuation risk, market liquidity risk, etc.) related to transition finance, which is the subject of evaluation. Furthermore, the JCR Climate Transition Finance Evaluation Finance Evaluation represents JCR's comprehensive opinion as of the date of this report and is not a representation of the facts. It does not constitute a recommendation in any way as to the decision of risk or the purchase, sale or holding of individual bonds, commercial paper, etc. The JCR Climate Transition Finance Assessment Finance Assessment may be changed, interrupted, or withdrawn due to changes in information, a lack of information, or other reasons. All rights to this document, including data from JCR Climate Transition Finance Assessment Finance Assessment, are reserved by JCR Climate Transition Finance Assessment. Any reproduction, translation, modification, etc. without the permission of JCR Climate Transition Finance Assessment is prohibited, regardless of the part or all of this document, including data from JCR Climate Transition Finance Assessment Finance Assessment.

### ■Glossary

JCR Climate Transition Finance Evaluation: The evaluation assesses the extent to which funds raised through transition financing will be allocated to green/transition projects as defined by JCR, as well as the degree of management, operations, and transparency initiatives related to the use of such transition financing, etc. The evaluation is on a five-point scale, from top to top, and is displayed using the rating symbols Green1 (T), Green2 (T), Green3 (T), Green4 (T), and Green5 (T).

### ■Status of registration as an external assessor of green finance

- Ministry of the Environment's external green bond reviewer registration
- ICMA (registered as an observer with the International Capital Markets Association)
- Members of UNEP FI Positive Impact Financial Principles Working Groups
- Climate Bonds Initiative Approved Verifier (Climate Change Initiative Accreditation Verification Organization)

### ■Status of registration as a credit rating agency, etc.

- Credit Rating Agency: the Commissioner of the Financial Services Agency (Rating) No.1
- EU Certified Credit Rating Agency
- NRSRO: JCR has registered with the following four of the five credit rating classes of the Securities and Exchange Commission's NRSRO(Nationally Recognized Statistical Rating Organization. (1)Financial institutions, broker dealers, (2) insurance companies, (3) general business corporations, and (4) government and local governments. If the disclosure is subject to Section 17g-7(a) of the Securities and Exchange Commission Rule, such disclosure is attached to the news releases posted on the JCR website (<https://www.jcr.co.jp/en/>).

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<Reference>

Check Sheet for Consistency with Basic Guidelines on Climate Transition Finance

September 9, 2021

Japan Credit Rating Agency, Ltd.

Company to be evaluated: Mitsui O.S.K Lines, Ltd.

The following are the check results of the consistency of the Finance with respect to the items recommended in the Basic Guidelines on Climate Transition Finance (the "Guidelines") published by the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment.

The Guidelines use three expressions: "should," "recommended," and "be considered/possible." These expressions are used in the following context:

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

#### **Element 1: Fundraiser's Climate Transition Strategy and Governance**

a) Financing through transition finance **should** aim to implement or incentivize the achievement of transition strategies. 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 decarbonization, and fundraiser's strategic planning.

Consistency: ✓

The LNG-fueled ferry procurement of the Finance is an effort to contribute to the realization of MOL Group Environmental Vision 2.1 ("Environmental Vision 2.1"), MOL's medium to long-term transition strategy to decarbonization. It is also an initiative that contributes to carbon neutrality in the entire coastal operations.

Environmental Vision 2.1 is consistent with the goals of the Paris Agreement and discloses plans for decarbonization.

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. 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.

Consistency: ✓

Through Environmental Vision 2.1, MOL aims to realize carbon neutrality in 2050, and the introduction of innovative technologies such as fuel conversion are included in the plan as an intention of business transformation for that purpose.

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.

Consistency: ✓

The following items have been examined and considered as impacts on the environment and society other than climate change:

Environment: Prevention of marine pollution and promotion of modal shift

Society: Reduction of excessive labor for truck drivers through the recent introduction of coastal ferries by increasing truck transport capacity between Osaka and Beppu, which is covered as a subject.

d) Climate change-related scenarios<sup>11</sup> **should** be referenced in developing transition strategies. The pathway to transition **should** be planned for respective sector and regions of individual fundraiser, who **may** generally be placed in a different starting point and pathway to transition.

Consistency: ✓

When formulating Environmental Vision 2.1, MOL conducts risk-analysis based on climate-change scenarios based on TCFD guidance and reflects the results in the Vision.

e) Transition strategies and plans must be highly credible in terms of their effectiveness. Therefore, it is **recommended** that a transition strategy and plan are linked to management strategy and business plan, including medium-term management plans.

Consistency: ✓

MOL's Environmental Vision 2.1 includes investment plans and calculations of resulting expected costs and returns for realizing them, which are linked to management strategies and business plans.

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.

Consistency: ✓

MOL formulated Environmental Vision 2.0 last fiscal year. Reflecting the growing momentum at home and abroad toward subsequent decarbonization, MOL announced Environmental Vision 2.1 this fiscal year, revising its goals upward and including more specific measures. As such, the Company would change or revise the content if it deems it necessary in the event of a major change in the external environment or other factors in the future.

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.

Consistency: ✓

All matters that are considered "should" in the Basic Guidelines satisfy their requirements. In addition, almost all items identified as "desirable" and "considered/possible" have met their requirements or are expected to be implemented in the future.

h) In order to secure the effectiveness of the transition strategy, the fundraiser **should** establish an organizational structure 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 assessing and managing such climate-related activities.

Consistency: ✓

In order to ensure the effectiveness of the transition strategy, MOL has established an organizational structure for the board of directors to oversee the activities and for management to play a role in assessing and managing such climate-related activities.

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.

Consistency: Not applicable

MOL is building its own transition strategy.

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.

Consistency: ✓

MOL's transition strategy is disclosed to the public on its website as Environmental Vision 2.1.

k) It is **possible** to disclose transition strategies and elements concerning the governance guaranteeing that the execution of transition strategies is in alignment with the reporting frameworks such as the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD; Final Report).

Consistency: ✓

MOL makes disclosures consistent with TCFD framework.

l) If the implementation of a transition strategy assumes impacts on society and environment other than climate change, it is **recommended** that the fundraiser explain the view underlying its approach<sup>14</sup>, etc. to address such impacts and disclose how the strategy on the whole contributes to achieving the Sustainable Development Goals (SDGs) so that the effects can be appropriately evaluated by the financier.

Consistency: ✓

MOL, through the framework, discloses to lenders its environmental and social impacts from factors other than climate change and its responses and contributions to SDGs achievement. It is also scheduled for publication to the public through JCR evaluation report.

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.

Consistency: ✓

Briefings are held when changing from Environmental Vision 2.0 to 2.1, and the reason for this is disclosed in detail. If there is a major change in the future, it is assumed that a similar response will be taken.

n) In terms of governance, it is **recommended** that disclosures include an organizational structure for overseeing the implementation of a transition strategy and for assessing and managing related initiatives. It is also **recommended** that disclosures include the specific roles of the constituent organizations and the management and the process by which the content of deliberations is reflected in management.



Consistency: ✓

The necessary organizational structure is established and announced in Environmental Vision 2.1.

o) 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.

Consistency: ✓

MOL utilizes JCR review in the implementation of the Finance for objective evaluation. Regarding the mid and long-term targets for decarbonization, the Company is considering acquiring certification from SBTi in the future.

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

Consistency: ✓

JCR confirms the above three items and provides this evaluation report.

## Element 2: Business Model Environmental Materiality

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.

Consistency: ✓

MOL's transition strategy is an initiative that contributes to its core coastal and ocean-going shipping business activities overall and reforms from the viewpoint of an infrastructure that supports the decarbonization of the entire society.

b) When identifying business activities that are environmentally material parts, it is **recommended** that the fundraiser consider multiple climate change-related scenarios that may possibly impact its judgment on the identification.

Consistency: ✓

MOL conducts scenario-based analyses in accordance with TCFD guidance.

c) In terms of considering materiality, it is **possible** to apply existing guidance provided by an

organization that creates standard criteria concerning sustainability reporting.

Consistency:

At this stage, it is still at the drafting stage, but MOL has set CO<sub>2</sub> emission reduction targets for 2035 by referring to the shipping guidance prepared by SBTi.

d) The fundraiser **should** indicate that climate change is an environmentally material part of business activities.

Consistency: ✓

MOL considers climate change to be an important theme when identifying its materiality and makes it one of its most important management issues. This has been clarified through the disclosure of integrated reports, websites, etc.

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.

Consistency: ✓

MOL formulates and analyses climate-change-related scenarios for its shipping business based on TCFD in Environmental Vision 2.1. Its scenario analysis involves risk and opportunity analysis of changes in cargo volumes under multiple temperature increase scenarios and their associated impact on the Company's business. This approach to scenario analysis is the same as that used when IMO formulated its GHG reduction strategy. The Company also refers to scenarios in SBT's shipping guidance (a draft at this point).

### Element 3: Climate Transition Strategy to be Science-based Including Targets and Pathways

a) The fundraiser **should** reference science-based targets in developing its transition strategies.

Consistency: ✓

MOL has established medium and long-term goals based on TCFD scenario analyses and SBT's shipping guidance scenarios (a draft at this point).

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.

Consistency: ✓

MOL's target setting includes the following medium-and long-term goals.  
Carbon neutral in 2050

Reduce CO<sub>2</sub> emissions intensity by 45% compared to 2019 by 2035

The scope of CO<sub>2</sub> emission reductions includes SCOPE 1 and some of SCOPE 3 and is quantitatively measurable.

c) In addition, it is recommended that GHG reduction targets, which could be formulated either in intensity and absolute terms, **should** consider environmental materiality and cover Scopes 1 through 3 of GHG Protocol, the international standard on supply-chain emissions.

It is **recommended** that targets covering Scope 3 be set using a practical calculation method when it could be subject to significant reduction in the fundraiser's business model.

It is also **possible** to disclose the avoided emissions as necessary.

Consistency: ✓

MOL calculated emissions for all scopes and determined targets for reductions. Although efforts will be made to reduce Scope 2 emissions, as they are only 45,000 tons, or only about 0.4% of Scope 1 CO<sub>2</sub> emissions (11,128,000 tons in FY2019), the Company has set a target centered on measures to reduce Scope 1 emissions. Scope 3 is included in the reduction targets to the extent possible, and CO<sub>2</sub> emissions for the relevant categories are calculated. MOL discloses data on the basis of both CO<sub>2</sub> emissions and GHG emissions intensity.

Target setting is based on emission intensity up to 2035 and on a total emissions basis in 2050.

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 Scenario (SDS) outlined by the International Energy Agency (IEA))
- 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, industries set out plans that are science-based achieving the Paris Agreement and so on.

Consistency: ✓

MOL referred to all of the above in its target setting.

- Internationally recognized scenarios  
IMO's GHG reduction strategy
- SBTi  
Establishment of current medium and long-term goals on the assumption that certification will be obtained in the future
- Roadmap and green growth strategy outlined in Zero Emission from International Shipping

Project established by the Ministry of Land, Infrastructure, Transport and Tourism

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.

Consistency: ✓

MOL has set a medium-term target in 2035 in consideration of the progress made in the development of decarbonization technologies including next-generation fuels. In addition, 2050 carbon neutral pathway including the goal is examined and disclosed in Environmental Vision 2.1.

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 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.

Consistency: ✓

Targets have been set taking into account a variety of factors in addition to a roadmap for decarbonization, such as investment plans and the resulting returns. Consequently, it is assumed that it would not be a linear path of the same slope.

g) The fundraiser **should** disclose the short- to mid-term and long-term targets they have set, including the base years etc.

Consistency: ✓

MOL uses FY2019 as the base year for its medium and long-term targets set forth in Environmental Vision 2.1.

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 **should** include that they are grounded in scientific basis.

Consistency: ✓

The reference listed in 3-d) is included in Environmental Vision 2.1.

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.

Consistency: ✓

Disclosed in Environmental Vision 2.1, including investment plans.

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 calculated based on a climate change scenario analysis

-> Whether scenarios, etc. widely recognized in the international community are used or referenced

- Whether the actual values of the indicators used for the targets are quantitatively measured using consistent measurement methods

-> Whether a specific GHG emissions reduction measure has been developed to achieve short- to mid-term targets aligned with long-term goals

Consistency: ✓

JCR has reviewed all of the above items to be met.

#### Element 4: Implementation Transparency

a) In implementing transition strategies, the fundraiser **should** provide transparency of the basic investment plan to the extent practicable.

Consistency: ✓

Environmental Vision 2.1 announces plans for investment in low-/de-carbonization from FY2021 through FY2023. In addition, major milestones through 2035 have also been announced.

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.

Consistency: ✓

The investment plan includes not only capital investment but also research and development expenses, etc.

c) It is **recommended** that the investment plan outline the assumed climate-related outcomes and impacts in a quantitative fashion where possible, along with the calculation methods and

prerequisites. If quantification is difficult, the use of external certification systems **can be** considered as a substitute for qualitative assessment.

Consistency: ✓

The expected outcomes and impacts of investments are shown in Environmental Vision 2.1. In addition, a series of investment plans are all positioned as measures that contribute to the achievement of medium and long-term goals, and the calculation method and preconditions for such goals are disclosed in the Vision.

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" is incorporated into the transition strategy.

Consistency: Not applicable

The transition strategy implementation by MOL does not require consideration for a just transition.

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.

Consistency: ✓

The implementation of MOL's transition strategy has no negative impact on employment or other social aspects. In terms of the environment, appropriate measures have been taken, such as the prevention of marine pollution.

f) Moreover, the outcomes arising from investments included in the investment plan **should** align with the targets.

Consistency: ✓

All of the results of MOL's investment plan are positioned as efforts that ultimately contribute to the goal of decarbonization, and results and targets are consistent each other.

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.

Consistency: Not applicable

All of the transition finance is allocated for a new investment in newly built coastal LNG-fueled ferries.

h) It is **recommended** that investment plans be disclosed by linking the outcomes and impacts with the expenditures to the extent practicable.

Consistency:

Amounts, results and impacts of investments under the Finance are disclosed in the framework in conjunction with each other. For the entire transition strategy, each investment target and the total investment amount are disclosed, but it is difficult at this point to link the results and impact individually, and therefore it is not disclosed. In the future, it is assumed that specific individual plans will be disclosed as soon as they are finalized.

i) It is **recommended** that the fundraiser, after securing financing, reports any deviations between the initial plan and the actual expenditure, outcomes and impacts. For any deviations, it is **recommended** that the underlying reasons be explained.

Consistency: ✓

Differences between the initial plan and actual expenditures, results, and impact of the Finance will be disclosed in an impact reporting, which is scheduled to be implemented on a regular basis after loan execution.

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.

Consistency: Not applicable

All of the Finance will be used for new investments.

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 evaluation organizations without disclosing it to the public.

Consistency: ✓

This is a loan, but the progress of the transition strategy is generally scheduled to be disclosed. The environmental improvement effect of LNG-fueled ferries will not be disclosed to the public from



the viewpoint of competition, but will be disclosed to lenders.

l) 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.

Consistency: Not applicable

MOL is not a small or medium-sized enterprise, and therefore is not subject to this conformity confirmation.