

Mitsui O.S.K. Lines, Ltd. | Project Overview

Case Study: Mitsui O.S.K. Lines, Ltd. Transition Loan

■ Corporate Profile

Industry	Shipping
Location	Japan
Business	One of the major Japanese shipping companies. Runs dry bulk business, energy business, product transport business, wellbeing lifestyle business and associated business.

Handling of the Four Elements in the Basic Guidelines

Element 1	<ul style="list-style-type: none"> Transition strategy: In Environmental Vision 2.2, Mitsui O.S.K. Lines, Ltd. (MOL) expressed that it will aim to achieve net zero in Scope 1, 2 and 3 for the entire Group in 2050, centered on the adoption of clean energy, the further adoption of energy-saving technologies, efficient operations, the building of business models that enable net zero, and initiatives for the expansion of low-carbon / decarbonized business by leveraging the group's collective strengths. Governance: MOL has established an environmental management system with the President & CEO as the chief executive officer.
Element 2	<ul style="list-style-type: none"> In the BLUE ACTION 2035 management plan, MOL positions environmental strategy as one of its main strategies. MOL identified "conservation of the marine and global environment" as one of its sustainability issues (materiality).
Element 3	<ul style="list-style-type: none"> MOL's basic policy is to implement a transition plan consistent with the 1.5°C target of the Paris Agreement. The medium to long-term targets in Environmental Vision 2.2 (reduce GHG emissions intensity by 45% in 2035 compared to 2019, achieve net zero GHG emissions throughout the group by 2050) are at levels consistent with the GHG reduction strategy of the International Maritime Organization (IMO), which was revised in 2023.
Element 4	<ul style="list-style-type: none"> MOL plans to invest a total of 650 billion yen for the resolution of environmental issues over three years from FY2023 to FY2025 Of the 650 billion yen, MOL plans to invest [1] 350 billion yen for Reduction of our Group's GHG Emission and [2] 300 billion yen for Low/Decarbonization Energy Business.

■ Transition Loan Overview

Fundraiser	Mitsui O.S.K. Lines, Ltd.
Fund Providers	Sumitomo Mitsui Banking Corporation and Sumitomo Mitsui Trust Bank, Limited (planned)
Evaluation Agency	DNV Business Assurance Japan K.K.
Planned Procurement Amount	To be determined
Planned Date of Procurement	January 2024

Main Candidates for Use of Proceeds and Candidate KPI/SPT

* The subject of appropriation this time is **bold and blue**.

Eligibility Criteria (MOL action)

Candidate Projects

Use of clean energy	<ul style="list-style-type: none"> - LNG fuel vessels - Zero-emission vessels - Adoption of renewable energy power
Further adoption of energy-saving technologies	<ul style="list-style-type: none"> - Vessels equipped with Wind Challenger - Adoption of wind propulsion devices and technology such as rotor sails * Possibility of adoption
Efficient operation	<ul style="list-style-type: none"> - Expenditure on energy saving and environmental protection technologies and equipment to replace equipment on existing ships
Building of business models that enable net zero emissions	<ul style="list-style-type: none"> - Expenditure related to initiatives for negative emissions (DAC, etc.)
Expansion of low-carbon / decarbonized business by leveraging the group's collective strengths	<ul style="list-style-type: none"> - Establishment of an ammonia and hydrogen supply chain - Expenditure related to offshore wind power generation business - Expenditure related to CCS and CCUS projects - Expenditure related to marine clean energy business
KPI	SPT
GHG emissions intensity / EEOI during transport: g-CO ₂ e/ton-mile	45% reduction by 2035 (compared to 2019)

(Scope 1 and part of Scope 3 of the MOL Group's ocean-going company-operated vessels)

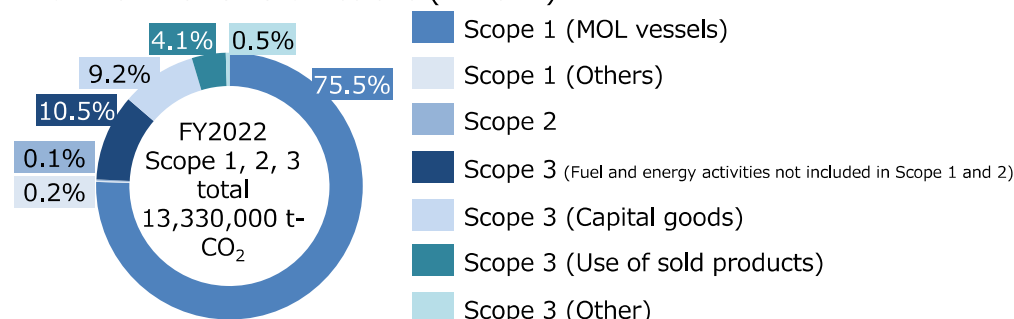
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Transition Strategy and Governance (Element 1)

Carbon Neutrality-Related Targets

- 2020s** Start of operation of net zero emission ocean-going vessels
- 2035** Reduce GHG emissions intensity by 45% (compared to 2019)
- 2050** Achieve net zero emissions throughout the group (all of Scope 1, 2, and 3 covered (MOL + consolidated subsidiaries))

Breakdown of GHG emissions (FY2022)



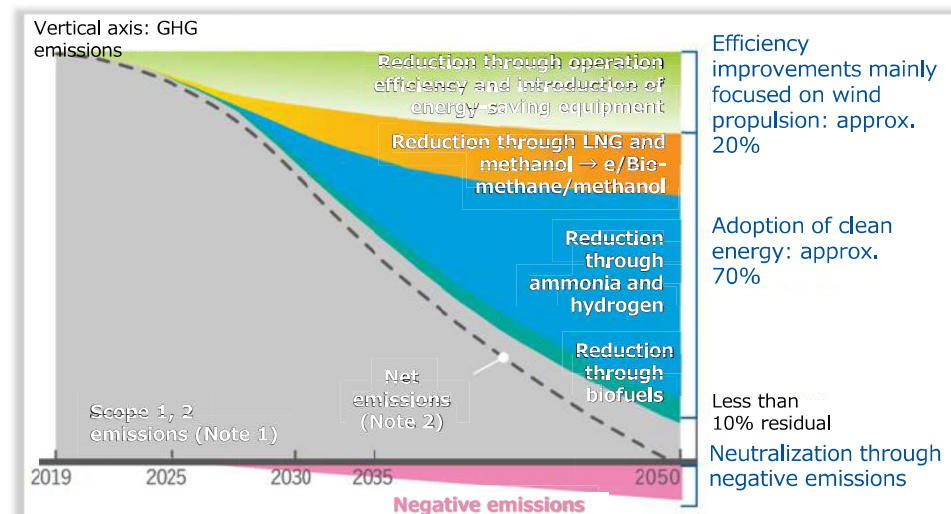
Five actions to achieve targets, and KPIs and milestones

- In Environmental Vision 2.2, formulated in 2023, MOL established five actions for net zero in 2050

Five actions	KPI examples	2030	2035	2050
01 Adopt clean energy	No. of LNG/methanol-fueled ocean-going vessels	90 vessels		Net zero GHG emissions throughout the group
	No. of net zero emissions ocean-going vessels		130 vessels	
	Ratio of zero-emission fuel used	5%	-	
	Ratio of power from renewable energy for Scope 2	100%	-	
02 Further adopt energy-saving technologies	No. of vessels equipped with Wind Challenger	25 vessels	80 vessels	
03 Efficient operations	Fuel efficiency	-5% (Compared to 2025 and 2019)		
04 Building of business models that enable net zero emissions	Amount of removal type carbon credits used	2.2 million t (Cumulative)	-	
05 Expand low-carbon / decarbonized business by leveraging the Group's collective strengths	-	-	-	

The pathway towards the reduction of emissions

- The “Pathway to Net Zero Emissions” embodies the reduction pathway towards net zero emissions in 2050.



(Note 1) Scope: MOL and all consolidated subsidiaries. Scope 3 emissions are also included in the 2050 net zero target.

(Note 2) For the calculation of emissions for years prior to the target year of 2050, emissions will not be offset with carbon dioxide removal.

Key Points

- MOL aims to reduce GHG emissions intensity by 45% in 2035 (compared to 2019) and achieve net zero emissions throughout the group, including Scope 1, 2 and 3, in 2050. These targets are also consistent with those of the International Maritime Organization (IMO), which were revised in 2023.
- The BLUE ACTION 2035 management plan positions the environmental strategy as one of MOL's main strategies. In Environmental Vision 2.2, which is based on that, MOL has established five actions and specific KPIs and milestones towards achieving net zero in 2050.
- In the “Pathway to Net Zero Emissions,” MOL embodies the reduction pathway through efficiency improvements and the use of LNG, ammonia, hydrogen and biofuels.

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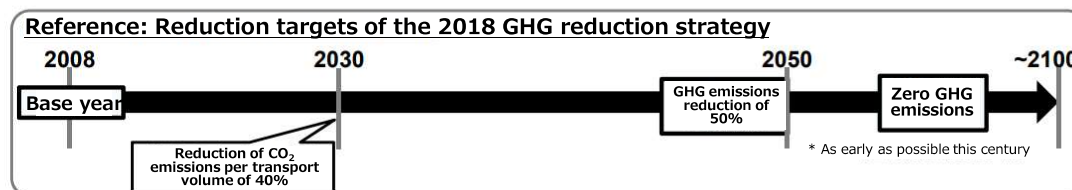
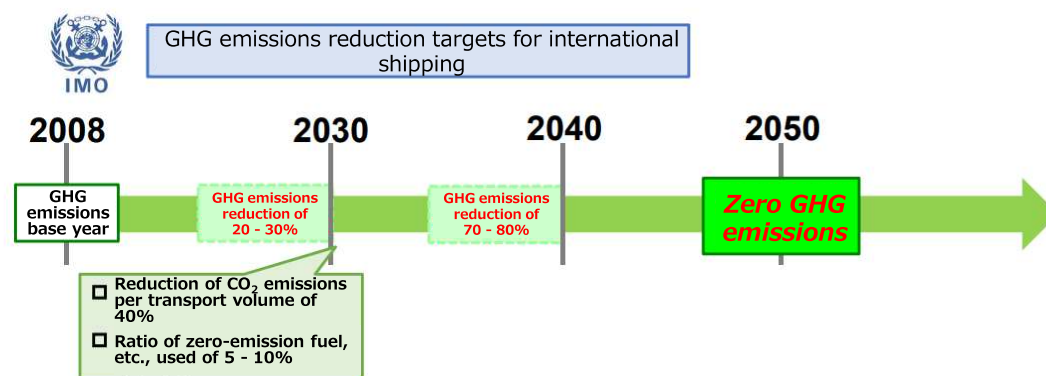
(Reference) International Maritime Organization (IMO) GHG Reduction Strategy

Revision of the International Maritime Organization (IMO) GHG reduction targets



- MOL revised the target upwards in 2023. Targets for 2030 and 2040 were added and updated for the achievement of zero GHG emissions in 2050.

<https://www.mlit.go.jp/report/press/content/001619435.pdf>

□ In July 2023, the International Maritime Organization (IMO) **agreed on the target of zero GHG emissions by around 2050 for international shipping** and revised its GHG reduction strategy.*
*Adopted in April 2018



Target comparison

	Mitsui O.S.K. Lines 		IMO 	
Policy	Environmental Vision 2.2 (2023)		GHG reduction strategy (2023)	
Indicators	Absolute value	Intensity	Absolute value	Intensity
Base year	2019		2008	
Short-term target	2025		-	
	-	-5% (Fuel efficiency) * Milestone	-	-
Medium-term target	2030	2035	2030	
	-23% (Scope1+2) * Milestone	-45% (ton-mile)	-20% (Effort target 30%) * Set as a guide	-40% (ton-mile) Multiple other items exist *
Long-term target	-		2040	
	-	-	-70% (Effort target 80%) * Set as a guide	-
	2050		2050 (around)	
	Net zero (Scope1+2+3)	-	Net zero	-

* Use at least 5% GHG zero-emission technologies, zero-emission fuels and energy sources for international shipping by 2030 (effort target: 10%)

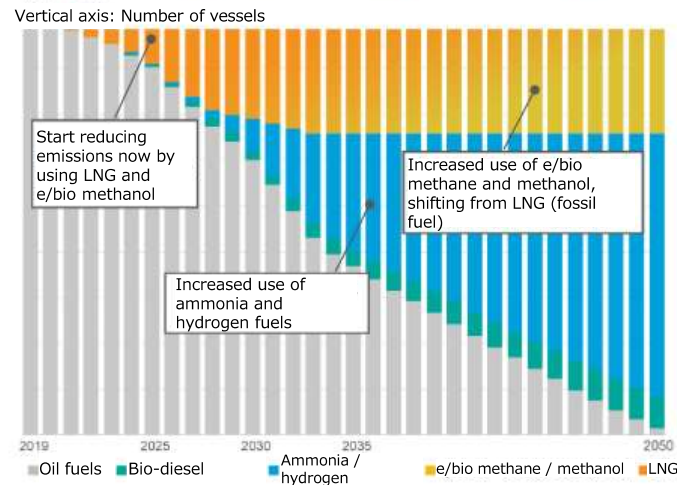
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Science Based Climate Transition Strategy (Including Targets and Pathways) (Element 3)

Roadmap for the Mitsui O.S.K. Lines alternative fuel fleet

* Consistent with the "Pathway" on page 2

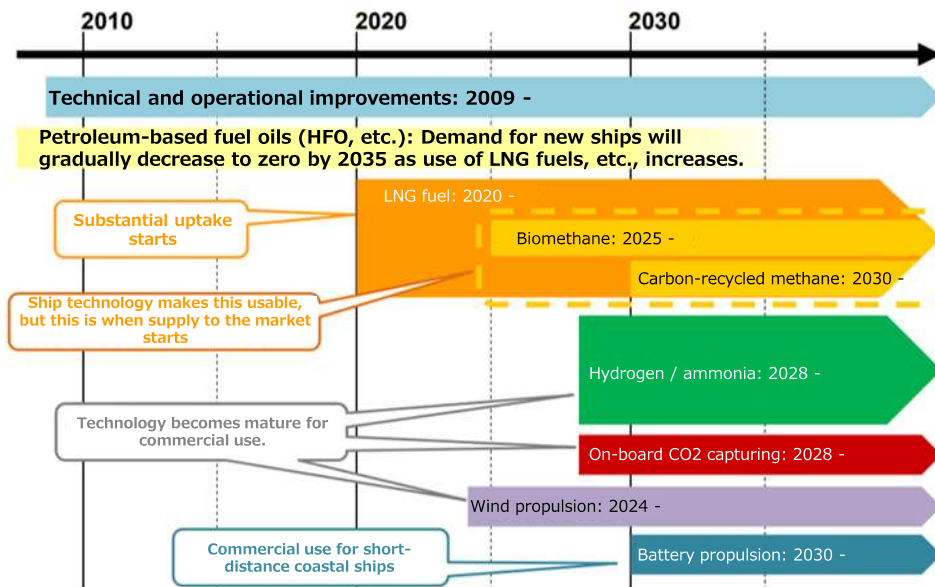
Composition of MOL's ocean-going fleet by fuel type



Initiatives consistent with the international maritime sector roadmap

- ▶ Efficiency improvements such as wind propulsion (See "Pathway" on page 2)
- ▶ LNG fuel
- ▶ Increased use of e/bio methane and methanol
- ▶ Increased use of hydrogen and ammonia fuels

Roadmap to Zero Emission from International Shipping



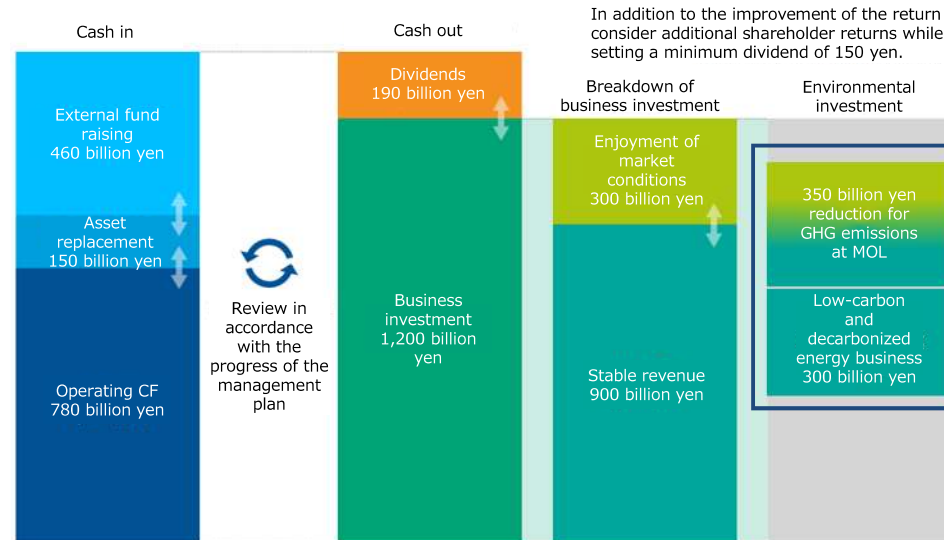
Key Points

- The five actions to achieve the medium to long-term goals and the KPI and milestones that measure the progress of the actions are consistent with the "Roadmap to Zero Emissions from International Shipping" established by the Ministry of Land, Infrastructure, Transport and Tourism Roadmap and the roadmap of the Study Group for the Promotion of Carbon Neutrality in Coastal Shipping.

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Transparency (Element 4)

Overall investment plan for FY2025 at MOL and the share taken by environmental investment



Of total business investment funds of 1,200 billion yen for the three-year period from FY2023 to FY2025, MOL is planning a total of 650 billion yen as investments for the resolution of environmental issues

Breakdown of environmental investment at MOL

	Rough investment amount (Note) (Cumulative for FY2023 to FY2025)
GHG emissions reduction targets for MOL	350 billion yen
Expansion of low-carbon and decarbonized energy business	300 billion yen
Total environmental investment	650 billion yen

Examples of initiatives

Alternative fuel vessels (LNG, methanol, bio-diesel, ammonia, hydrogen, etc.)
Wind powered equipment (Wind Challenger, etc.)
Deepening of efficient operations etc.

Examples of initiatives

Offshore wind power generation business
Clean energy production (ammonia, hydrogen, e/bio methane, methanol, etc.)
Clean energy transportation (liquefied CO₂, ammonia, liquefied hydrogen, etc.)
Negative emission projects etc.

Percentage of total investment of 1,200 billion yen
50% or more
Implement positive capital expenditures towards emissions reductions in line with the 1.5°C target

Note: Indicative amounts and may change in future.

Key Points

- MOL plans to invest a total of 650 billion yen for the resolution of environmental issues over three years from FY2023 to FY2025.
- Of the 650 billion yen, MOL plans to invest [1] 350 billion yen for Reduction of our Group's GHG Emission and [2] 300 billion yen for Low/Decarbonization Energy Business.

Subsidy Review Committee | Overview of Results

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Review Result: Approved

Approved as a case study of subsidies for climate innovation finance promotion projects

Main opinions

Transition strategy

- This is a good project with a solid transition strategy and ambitious targets.
- LNG-fueled vessels will be very important as a transition. It would be more convincing in terms of avoiding the lock-in of LNG vessels if the prospects for the use of e-methane could be set out more specifically.
- The establishment of supply systems and infrastructure for clean fuels such as hydrogen and ammonia will also be important for the realization of the transition. I understand that the company is positively involved in the clean fuel production and supply business by participating in international initiatives and the like, but I hope that it will continue to promote the transition for both ships and ports.

Other elements / other

- I would like this to be implemented positively for RORO ships. With the arrival of a new era of logistics and while the labor environment for drivers is an issue, RORO ships may well be the trump card. Internationally too, the development of ports and harbors for RORO vessels is progressing, particularly in China, and it is important to promote initiatives based on international trends.
- Although not disclosed publicly, this project has also shared the SPTs each year with the fund providers. While it may be difficult to disclose some content externally, it is important that it is at least shared with the fund providers to follow progress.

This report focuses on the contribution of transition finance to the realization of Japan's 2050 carbon neutrality and the Paris Agreement, and does not cover any evaluation of the risks of transition finance as a financial instrument. Even in the model case of this project, it should be noted that credit risks and other risks (such as price fluctuation or liquidity risks in the case of bonds) exist as in ordinary financing.