

**Briefing on MOL Group Environmental Vision 2.1
(Online Presentation) Questions and Answers**

Q1) You are planning to invest in 90 LNG-fueled vessels and 110 next-generation fuel-powered vessels. How much are you planning to invest in total? Please also explain your thoughts on financing.

A1) By 2030, we expect a total investment of approximately 1.6 trillion yen for LNG-fueled vessels and next-generation fuel-powered vessels, and approximately 2 trillion yen if including investment in environmental projects such as LNG power generation, wind power generation, wave power generation, etc. However, we do not intend to raise all the necessary funds by ourselves. As there are chartered vessels and shared vessels with business partners, our company's own investment amount is assumed to be about half of that.

Q2) Are there any specific types of vessels that you will preferentially introduce LNG fuel? You are planning to start operating a net zero emission ocean-going vessel in the 2020s. What kind of next-generation fuel do you expect to use?

A2) Since the supply chain for marine LNG fuel has not yet been established widely, first candidates will be vessels that are deployed in routes where LNG fuel can be replenished at fixed locations, and need relatively less additional investment for LNG tanks, etc. compared to smaller vessels, i.e. containerships*, capsized bulkers and car carriers.

Ammonia is assumed to be the fuel for net zero emission vessels in the 2020s. The assumption is that the ammonia-powered main engine to be developed around 2025, and net-zero-emission vessels equipped with it to start operating around 2027-2028.

*Emission from containerships is not included in scope 1-3 of our company because they are operated by Ocean Network Express, our equity-method affiliate. As a shareholder, however, we will encourage them to take proactive measures.

Q3) You said that investment will be approximately 1.6 trillion yen in LNG-fueled vessels and next-generation fuel-powered vessels. How much will you invest in LNG-fueled vessels alone? Also, is it correct to assume that the order for LNG-fueled vessels will basically be completed with the 90 vessels announced this time?

A3) Roughly speaking, an investment of about 700 billion yen is estimated to be required for LNG-fueled vessels. Depending on the cargo movements over the next 10 years, the number of vessels may increase or decrease from 90. However, at this point in time, we expect demand to reach this level based on reasonable estimates. We will develop human resources, technological capabilities, and a financial strength responding to these needs.

Q4) Does the reduction of GHG emissions from ships include the emissions from chartered vessels?

A4) As you understand, it is also applicable to chartered vessels with which our company provides operations and transportation services.

Q5) Since last year, major accidents have occurred one after another, such as the oil spill off Mauritius, the grounding at the Suez Canal, falling off of a large number of containers, a fire off the coast of Sri Lanka, and a crane collapse by a containership in Taiwan. What do you think the reason is why such accidents are conspicuous these days? Also, do you feel that response from the society to the environmental impact of accidents has become stronger?

A5) First of all, I believe that a dramatic increase in the volume of maritime trade is behind this. Accordingly, the chance of an accident has increased. At the same time, the size of ships has enlarged, and it has become more difficult to secure excellent seafarers. In addition, due to the COVID-19, there are constraints such as the inability to dispatch engineers to the site immediately, making it difficult to resolve equipment failures and other issues. At present, due to economic stimulus measures taken by various countries, cargo movements of not only containers but also iron ore and others have increased compared to 2019, the pre-COVID-19 year, but restrictions remain.

I feel that the response from society to the accident has become very strong due to the increase in environmental awareness. Especially in the case like oil pollution

accidents, the effect spreads in various ways.

Q6) Your target is to increase the number of net zero emission ocean-going vessels to approximately 110 by 2035. Do you expect to be focusing on any specific clean alternative fuel at that stage? Or will it be a mixture of various clean alternative fuels such as ammonia, hydrogen and synthetic methane?

A6) Please refer to "Composition of the MOL Ocean-Going Fleet by Fuel Type Going Forward" on page 15. In 2035, the ratio of ammonia will reach nearly half, and after that LNG will gradually be replaced by synthetic methane. Biodiesel will supplement it.

Q7) I understand that chartered vessels are also included in the target of reducing GHG emissions. Could you tell us what needs to be done to achieve net zero emissions for vessels owned by shipowners?

A7) Shipowners will be asked to replace or retain clean alternative fuel vessels. They themselves will also be required to make their business more sustainable in the future. Our company has a lot of information on clean alternative fuel vessels, including technical aspects, so we would like to work together with them while providing various supports.

Q8) The IMO sets rules for GHG emission in the shipping industry. If MOL is going to try to reduce GHG emission more aggressively than the IMO rules, does it not pose a risk of losing cost competitiveness compared to other companies in the industry?

A8) Looking at the global trend, I believe that we should plan ahead on the premise that all industrial sectors in developed countries will eventually converge to net zero emission in 2050. Considering the possible exception on emerging countries, small-sized vessels and so forth, in reality it may be that not all shipping companies in the world can achieve net zero emission in 2050. However, it is expected that the economic disadvantages of continuing to emit GHG, such as carbon tax, will increase considerably in the future, and our company intends to build an advantageous position over other companies by reducing GHG emission.

Q9) Within the presentation material, there is no description of what cargo you will transport but what is your plan on thermal coal transportation business?

A9) Please refer to presentation material slide page 6. Using the TCFD framework, we analyzed the 3 °C scenario and the 2 °C scenario. As a result, if the scenario of 2 °C or less is realized, transportation demand for fossil fuels, mainly for oil and coal, is expected to decrease toward 2040. Based on this premise, we will adjust our fleet size toward 2035 going forward.

Q10) What are your company's strengths in environmental technologies, such as reducing GHG emission, compared to other major shipping companies in Japan and overseas?

A10) We plan to reduce GHG emission in a two-stage strategy. The first step is to promote the conversion to LNG fuel. In addition to the operation of LNG carriers, we have consciously expanded LNG related businesses, such as FSRUs, LNG-to-Powerships and LNG bunkering vessels. We operate the world's largest LNG carrier fleet, and by expanding its LNG related business in a wide range of areas, we have not only accumulated technological expertise of how to handle LNG but also established a close relationship with major oil companies and traders through LNG projects we have participated that contribute to obtaining marine LNG fuel efficiently at a lower cost. We believe we are one step ahead of our competitors on coming conversion to LNG fuel.

In the second stage, we need to pave our way to achieve net zero emission by using ammonia, hydrogen, and methanation. However, we believe that we have a relative advantage in methanation technology because we can work on a significant portion by existing LNG technology. In the past one or two years, the study for ammonia and hydrogen as vessel fuels started all at once, so we will be competing side by side for these areas. In order to promote these new initiatives, we need to deepen our technologies leveraging our relationships with customers and expertise that we have cultivated through our various businesses.

In addition, because the respective company's base year for the GHG reduction target is different from one another, it is not possible to make an apple-to-apple comparison for the 2030/2035 target. However, while other companies are aiming for a 50% reduction from the base year in the 2050 target, what our company is aiming for is a net zero emission, which is a big difference.

Q11) In order to achieve a 45% reduction in GHG emission per unit load (ton-mile) by 2035, what is the ratio of the portion that can be achieved by extending current technology and the portion that requires technological innovation? In addition, what percentage of the fleet should be net zero emission ships and clean alternative fuel ships?

A11) Some of the required handling and logistics of alternative fuels is compatible by the extension of current technology. For example, internal-combustion engines using ammonia and hydrogen are still under development, but their transportation and storage can be based on existing technologies. In addition, synthetic methane can be used in existing internal-combustion engines. As you can see on presentation material page 15, we plan to achieve a 45% reduction in GHG emissions per unit load (ton-mile) by 110 net zero emission ocean-going vessels and 90 LNG-fueled vessels that reduce GHG emission 20% to 30% compared to current oil-fueled vessels. LNG fuel will then be gradually replaced with synthetic methane fuel going forward.

Q12) How did customers and business partners respond when you announced Environmental Vision 2.0 last year?

A12) I feel that it has changed dramatically in the past year. When we announced our Environmental Vision 2.0 last year, many of our customers were skeptical about its implementation and feasibility, even though they acknowledged the need for environmental measures. However, the world's situation has changed greatly in the past year. In Japan, I think the government's clear policy of net zero was a major factor. We have been receiving many inquiries from our customers in recent months. In response to this situation, we decided to formulate Environmental Vision 2.1 in order to clearly redefine our approach in line with the current situation. The world has now started to move in full-scale on tackling environmental issues, and if we remain idle, even our Environmental Vision 2.1 may become obsolete in just one to two years. We will continue to work with this sense of crisis.

Q13) I would like to ask you about improving the operational efficiency of existing vessels. In order to improve operational efficiency, we believe that you will conduct slow steaming as a main measure. By slow steaming your vessels, it is expected that

the amount of cargo you transport will decrease from the current amount. What kind of impact will this have on financial results?

A13) We need to take the complex correlation with the fuel price into account when considering slow steaming. When crude oil prices hit a historical high level in 2008, reducing fuel consumption by slow steaming was more profitable even if transport volumes decreased. Even after clean alternative fuels are introduced in the future, the concept of economic efficiency will be basically the same. The higher the fuel price, the greater the economic effect of slow steaming. While we wish not to happen, we presume that we will face soaring fuel prices sometime in the future as we switch to clean alternative fuels. We believe that we should pursue reducing GHG emissions by slow steaming along with the effort to reduce total fuel consumption. In the future, when clean alternative fuels become mainstream, it is not yet clear how fuel prices will settle down, but we must consider the most optimal operation at that time. Unless fuel prices become significantly lower, the economic impact of slow navigation is more likely to be positive than negative.