





December 22, 2022 Mitsui O.S.K. Lines, Ltd. Ferry Sunflower Limited Kyushu Electric Power Co., Inc.

LNG-fueled Ferry Sunflower Kurenai Starts to Receive LNG Fuel Supply — Marks Japan's 1st Truck-to-Ship LNG Bunkering with Skid —

Mitsui O.S.K. Lines, Ltd. (MOL), its group company Ferry Sunflower Limited, and Kyushu Electric Power Co., Inc. (Kyuden) announced that the *Sunflower Kurenai*, the Japan's first LNG-fueled ferry^(Note) ordered by MOL and operated by Ferry Sunflower, received its first LNG fuel supply today at the Port of Beppu in Oita Prefecture (at the north wharf of Pier 3) from Kyuden.

LNG fuel was supplied via truck-to-ship* to the ferry —the first time in Japan— with a skid which connected four tank trucks to the ferry. Unlike a conventional method of receiving LNG fuel supply by connecting a single tank truck to LNG-fueled vessels, the use of the skid enables the ferry to receive LNG fuel from four tank trucks simultaneously, speeding up the process. The LNG fuel was supplied to the tank trucks by Oita Liquefied Natural Gas Company, Inc., a Kyuden's group company, and Niyac Corporation transported the LNG fuel and supplied it to the ferry.

* One of the methods of supplying LNG to vessels. LNG is supplied to a LNG-fueled vessel at berth from tank trucks parked on the wharf.

The ferry will be deployed on the Osaka-Beppu route operated by Ferry Sunflower and start commercial service from Osaka to Beppu on January 13, 2023. Thereafter, LNG fuel will be supplied when the ferry calls at the Port of Beppu. The LNG fuel supplied this time will be used for trial operation ahead of the launch of commercial service.

LNG fuel emits almost no sulfur oxide and has GHG emission reduction effects, such as reduction of carbon dioxide (CO₂) emissions by about 25% compared to conventional fuel oil, and it is the most effective low-carbon ship fuel at this time. MOL, Ferry Sunflower and Kyuden will continue to proactively use environment-friendly LNG as they work to realize a low-carbon society.





LNG fuel being supplied by four tank trucks and skid

(Note) Please refer to the following related press releases.

[MOL]

November 20, 2019: <u>MOL Group to Build Japan's 1st LNG-fueled Ferries</u>: *Sunflower Kurenai* and *Sunflower Murasaki*

March 3, 2022: <u>MOL Holds Naming/Launching Ceremonies for Japan's 1st LNG-fueled Ferry</u> <u>Sunflower Kurenai - Slated to Enter Service on Osaka-Beppu Route in January 2023</u> August 30, 2022: <u>MOL Holds Naming/Launching Ceremonies for LNG-fueled Ferry Sunflower</u> *Murasaki-* 2nd of 4 MOL Group-ordered LNG-Fueled Ferries Slated to Enter Service -

[Joint names of the three companies]

March 29, 2021 press release: <u>MOL, Kyushu Electric Power Sign Basic Agreement for LNG</u> Fuel Supply for Japan's First LNG-Fueled Ferries: *Sunflower Kurenai* and *Sunflower Murasaki*

< Company Outline >

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