



## **ITOCHU ENEX Announces the Expansion of the Joint Study Framework on Ammonia as an Alternative Marine Fuel to Include 34 Companies and Organizations**

ITOCHU ENEX CO., LTD. (Headquartered in Chiyoda-ku, Tokyo; Kenji Okada, Representative Director, President and CEO; hereinafter "ITOCHU ENEX") established a joint study framework of 23 companies and organizations with the objective of collaboratively discussing common issues in pursuit of the utilization of ammonia as an alternative marine fuel ([news release dated June 11, 2021](#)). Recently, 11 companies and organizations have joined this joint study framework, expanding it to 34 companies. The 11 companies are Anglo Eastern Ship Management, BHP, Bureau Veritas, CMA-CGM, INPEX, JFE Steel, Lloyd's Register, Maersk, Navios Maritime, Rio Tinto and Vitol Asia. This expansion is an indicator of the high level of interest in the utilization of ammonia as an alternative maritime fuel.

In 2021, the Joint Study Framework will discuss common issues including (1) Safety assessment of NH<sub>3</sub> fuel ship under guideline, (2) Safety assessment of NH<sub>3</sub> bunkering, (3) NH<sub>3</sub> fuel specification, and (4) NET CO<sub>2</sub> emission at NH<sub>3</sub> production. The discussion has included collaborators from CF Industries, Nutrien and Yara, major ammonia producers. Going forward, the Joint Study Framework will seek to share opinions, view, expertise and experience with other ammonia producers, related international organizations, port authorities and regulators in potential bunkering countries.

The establishment of the council is an important element not only in the verification and organization of common issues regarding the use of ammonia as a maritime fuel, which is a new challenge for maritime stakeholders, and also closely related to the integrated project of ITOCHU Corporation and its partner companies working to develop ships using ammonia fuels and establish a global ammonia supply chain. ITOCHU ENEX Co., Ltd. will promote initiatives working to reduce GHG emissions in cooperation with its customers and the ministries involved in these efforts in Japan and other countries.

## JOINT STUDY FRAMEWORK

- A total of 34 companies and organizations including companies in the energy, mining, steel mill, power utility, chemical, terminal, shipping, shipbuilding and manufacturing industries as well as maritime fuel suppliers and classification societies discuss common issues regarding ammonia as maritime fuel. -



Participating Members : ABS, ANGLO AMERICAN, ANGLO EASTERN, BHP, BUREAU VERITAS, CLASSNK, CMA-CGM, DNV, EQUINOR, FORTESCUE METALS GROUP, GENCO SHIPPING & TRADING, INPEX, JERA, JFE STEEL, K-LINE, LLOYD' S REGISTER, MAERSK, MAN ENERGY SOLUTIONS, MITSUI E&S MACHINERY, NAVIOS MARITIME, NIHON SHIPYARD, NS UNITED, PAVILION ENERGY, RIO TINTO, TOTAENERGIES, TRAFIGURA, UBE INDUSTRIES, UNIPER SE, UYENO TRANSTECH, VALE, VITOL ASIA, VOPAK TERMINAL SINGAPORE, ITOCHU ENEX and ITOCHU.

[Contact information for this release]

ITOCHU ENEX Co.,Ltd.

Industrial Business Division, Marine Fuels Department

Iio, Shikata, and Ishida

Tel: +81-3-4233-8083

ITOCHU ENEX Co.,Ltd.

Corporate Communications Office, Management Planning Department,

Aoyagi

Tel: +81-3-4233-8003, email: [iri@itcenex.com](mailto:iri@itcenex.com)