

Initiation of Joint Feasibility Study in Phase 2 of Blue Ammonia Value Chain between Eastern Siberia and Japan

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Toyo Engineering Corporation

Toyo Engineering Corporation (TOYO, President and CEO Haruo Nagamatsu) and Irkutsk Oil Company (“IOC”), Japan Oil, Gas and Metals National Corporation (“JOGMEC”), and ITOCHU Corporation (“ITOCHU”) agreed to implement a detailed study for commercialization as Phase 2 following Phase 1 implemented in 2020 towards the establishment of a blue ammonia value chain between Eastern Siberia and Japan. As with the Phase 1, TOYO and ITOCHU will implement the Phase 2 study entrusted by JOGMEC and establish a master plan for the value chain that converts natural gas produced by the IOC in Eastern Siberia into ammonia and transports it to Japan.

In Phase 2, for the commercialization of a large-scale blue ammonia value chain from Eastern Siberia to Japan, TOYO will execute a conceptual design to produce ammonia from natural gas produced in IOC’s oil fields in Eastern Siberia. In this conceptual design, it is expected that CO₂ emitted during the production process of ammonia is utilized for the CO₂-EOR to increase oil production in the oil and gas fields in Eastern Siberia owned by IOC or other CCUS methods. For the inland transportation of ammonia, it is considered to utilize a railway cargo or pipeline. These studies will be formulated with a gradual approach to consider the timeline of value chain commercialization.

TOYO has over 80 project experiences in constructing ammonia plant and has been working on consulting, engineering and construction of oil & gas production facilities and enhanced oil recovery unit. In addition, TOYO has more than 50 years of business history in Russia including Eastern Siberia.

TOYO, IOC, JOGMEC and ITOCHU will establish a blue ammonia value chain between Eastern Siberia and Japan working in close collaboration to utilize the technologies and knowledge possessed by the parties. The collaboration aims to contribute to the realization of a sustainable society through efforts to reduce greenhouse gases by introducing blue ammonia in Japan and Asia as a fuel for thermal power plants, ships and other uses, harnessing its promise as a decarbonization measure.



Blue ammonia value chain flow diagram (Concept)

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