

# NEWS RELEASE

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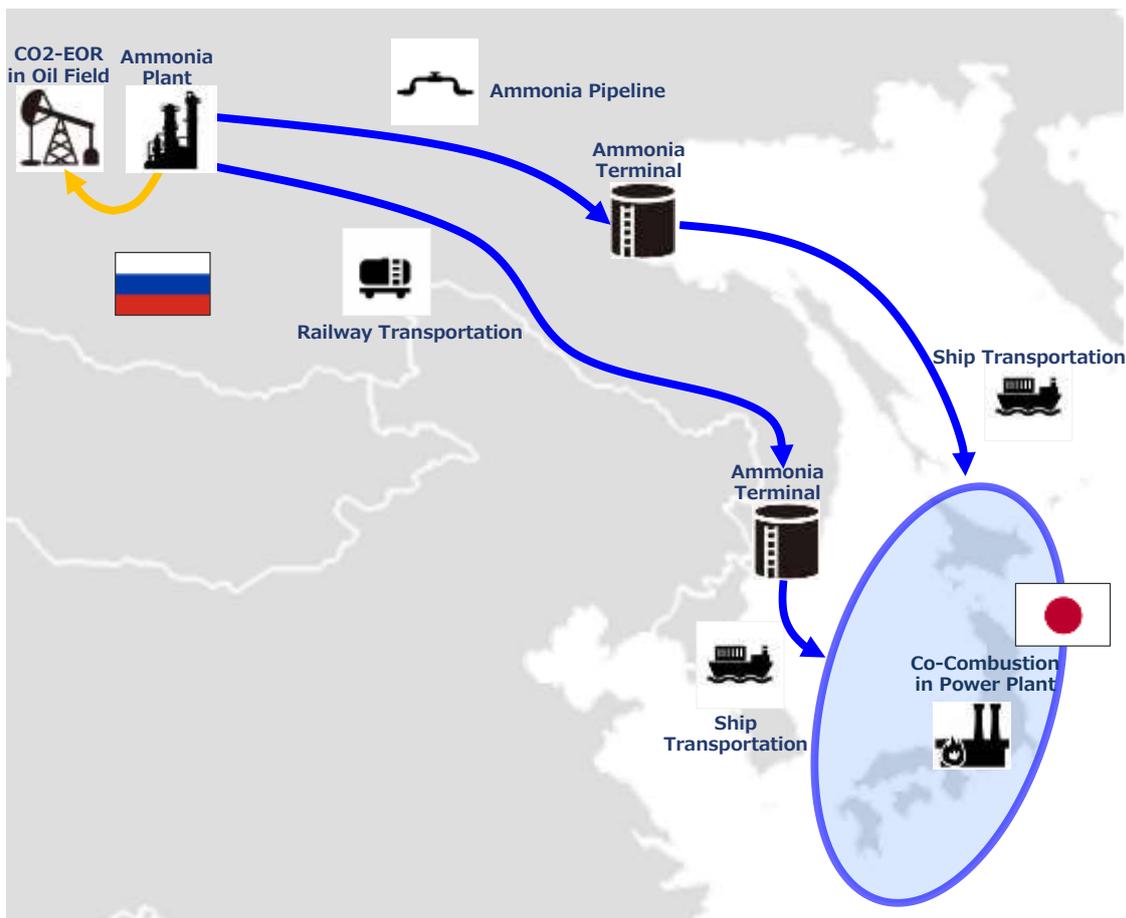


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## Initiation of Joint Feasibility Study (Phase 2) of Ammonia Value Chain between Eastern Siberia and Japan for future clean hydrogen · ammonia introduction

JOGMEC (Headquarter: Minato-ku, Tokyo; Chairman & CEO: HOSONO Tetsuhiro), Irkutsk Oil Company (hereinafter "IOC"), Toyo Engineering Corporation (hereinafter "TOYO"), and ITOCHU Corporation (hereinafter "ITOCHU") agree on the joint feasibility study (Phase 2) of blue ammonia value chain between eastern Siberia and Japan, which will implement a detailed study to establish a master plan for commercialization.



Low-carbon ammonia value chain flow diagram (Concept)

On April 1, 2021, JOGMEC has formulated the "Carbon Neutral Initiative" in order to promote various projects that contribute to the realization of a carbon-neutral society.

Through the maximum use of technical knowledge of JOGMEC on the subsurface and surface

characteristics, JOGMEC will strengthen financial and technical support for Japanese companies in securing suitable sites for CCS and promote environmental friendly resource developments. JOGMEC will also contribute to the construction of blue hydrogen and ammonia supply chains and market expansion through the support for CCS.

JOGMEC conducted the feasibility study of a supply chain to transport ammonia converted from hydrogen produced by IOC from eastern Siberia Russia to Japan as Phase 1 in 2020. JOGMEC also evaluated key elements of value chain and identified the important issues for commercialization.

In Phase 2, for the commercialization of a large-scale blue ammonia value chain from Eastern Siberia to Japan, JOGMEC will execute a conceptual design to produce ammonia from natural gas produced in IOC's oil fields in Eastern Siberia by entrusting TOYO and ITOCHU alike Phase1. In this conceptual design, it is expected that CO<sub>2</sub> emitted during the production process of ammonia is utilized for CO<sub>2</sub>-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. The result of the studies will be compiled to propose a stepwise approach and the timeline towards value chain commercialization.

IOC, JOGMEC, TOYO and ITOCHU will contribute to establish a blue ammonia value chain between Eastern Siberia and Japan by working in close collaboration to utilize the technologies and knowledge possessed by the parties and to promote the realization of a carbon neutral society by introducing blue ammonia to Japan and Asia as a fuel for power plants, ships and other uses.