



JX Nippon Oil & Gas Exploration



Mitsui O.S.K. Lines

February 5, 2024

JX Nippon Oil & Gas Exploration Corporation

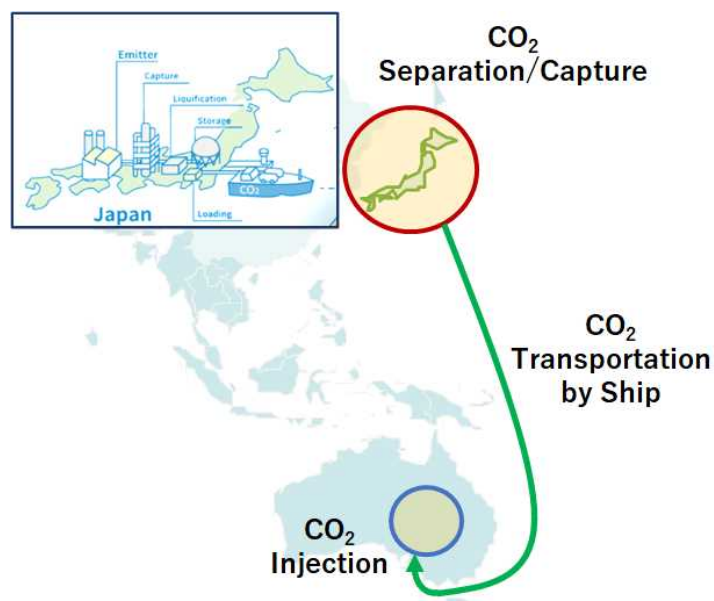
Mitsui O.S.K. Lines, Ltd.

JX and MOL Sign MoU for Development of Cross Border CCS Value Chain

JX Nippon Oil & Gas Exploration Corporation (JX; President & CEO: Toshiya Nakahara; Head Office: Chiyoda-ku, Tokyo) and TOKYO-Mitsui O.S.K. Lines, Ltd. (MOL; President & CEO: Takeshi Hashimoto; Headquarters: Minato-ku, Tokyo) are pleased to announce that JX and MOL have signed a memorandum of understanding (MoU) to develop a Carbon dioxide Capture and Storage (CCS) value chain between Japan and Australia, including marine transport of carbon dioxide(CO₂).

The MoU focuses on the establishment of a CCS value chain by capturing CO₂ emitted from ENEOS refinery and nearby various industries in Japan, transporting it by CO₂ carrier to the Port of Bonython in Australia, and injecting and storing it at the selected storage site. JX and MOL will jointly conduct the following studies:

- (1) To select a liquefied CO₂ carrier suitable for conditions at ports in Japan and Australia and the expected CO₂ transport distance and volume, and estimation of marine transport costs
- (2) To estimate the cost of the entire CCS value chain between Japan and Australia.



<Diagram of the CCS value chain>

MOL will focus mainly on item (1), while JX's role will center on item (2).

General Administration Department, JX Nippon Oil & Gas Exploration Corporation,
1-2 Otemachi 1-chome, Chiyoda-ku, Tokyo 100-8163 Japan TEL +81-3-6257-6000

CCS is a technology that separates and captures CO₂ emitted from industrial activities and stores it in a stable underground geological formation. It represents an effective means to realize a carbon neutral society, and is attracting attention as a realistic approach to promote decarbonization, especially in industrial sector where the transition to renewable energy is difficult.

Through the MoU, JX and MOL will accelerate their initiatives to build a CCS value chain and contribute to the realization of a carbon-neutral society.

● JX

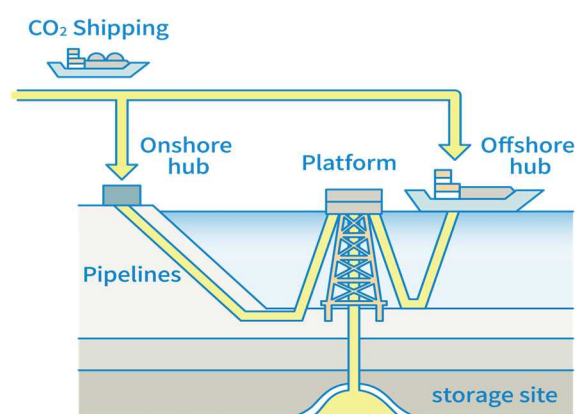
JX has positioned CCS as an important initiative in its business strategy under its “Two-Pronged” approach, in which, in addition to the conventional oil and natural gas development business, environmentally friendly businesses centered on CCS/CCUS are another axis of the company's operations. In Texas, the U.S., the company is taking the lead over its competitors by commercializing the Petra Nova CCUS project (see figure below), which aims to increase crude oil production by injecting CO₂ recovered from the exhaust gas of thermal power plants into oil fields. It will contribute to the realization of a carbon-neutral society by leveraging the knowledge it has accumulated through its various CCS/CCUS-related businesses.

<Note> CCUS stands for Carbon Dioxide Capture, Utilization and Storage. It is a technology that focuses on generating new commodities and energy in addition to capturing and storing CO₂.

URL: <https://www.nex.jx-group.co.jp/english/>



Petra Nova Carbon Capture Facility



CCS Process (in case of subsea injection)

● MOL Group

[The MOL Group Vision](#) is to develop a variety of social infrastructure businesses in addition to traditional shipping businesses, and will meet the evolving social needs including environmental conservation, with innovative technology and services.

The CCS/CCUS business is an initiative that is consistent with the MOL Group Vision, as well as with the expansion of non-shipping businesses set forth in the [BLUE ACTION 2035](#) management plan and one of the strategies in the [MOL Group Environmental Vision 2.2](#), namely, “Expand low-carbon/decarbonized business by leveraging the group’s collective strengths.” From the blue oceans, the MOL Group will contribute to the sustainable development of society and the preservation of nature, sustain people's lives, and ensure a prosperous future, by expanding business upstream and downstream in the CCS/CCUS value chain, acquiring projects, and accelerating the development of the value chain.

URL: <https://www.mol.co.jp/en/>

