

December 26, 2023

JX Nippon Oil & Gas Exploration Corporation

Commencement of Basic Study for Underground Hydrogen Generation

JX Nippon Oil & Gas Exploration Corporation (President: Toshiya Nakahara, “JX”) has been selected by the New Energy and Industrial Technology Development Organization (“NEDO”) to undertake the “Basic Study for Underground Hydrogen Generation Technology” (“Study”). This Study is part of NEDO’s program, “International Demonstration Project on Japan’s Technologies for Decarbonization and Energy Transition”.

This Study is to verify the feasibility of a new hydrogen production method as the NEDO International Demonstration Project, in which clean hydrogen is generated from depleted oil reservoir, leaving associated greenhouse gas underground.

Currently, hydrogen is predominantly produced from fossil fuels such as oil and gas. The Study will investigate hydrogen production using CCS (Note 1) technology, with the aim of reducing greenhouse gas emissions. Using CCS technology, O₂ will be introduced underground to convert stranded oil and gas into hydrogen and CO₂. By this process, hydrogen is produced while CO₂ is captured underground. If successful, depleted oil fields will be converted into clean hydrogen fields, greenhouse gas emissions will be reduced and costs in the hydrogen production process can also be decreased.

We will continue to explore various business opportunities to contribute to the realization of a sustainable society.

End of document

(Note 1) CCS: Carbon dioxide Capture and Storage. Technology that captures CO₂ and stores it underground permanently.

NEDO official announcement: <https://www.nedo.go.jp/content/100967615.pdf>

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

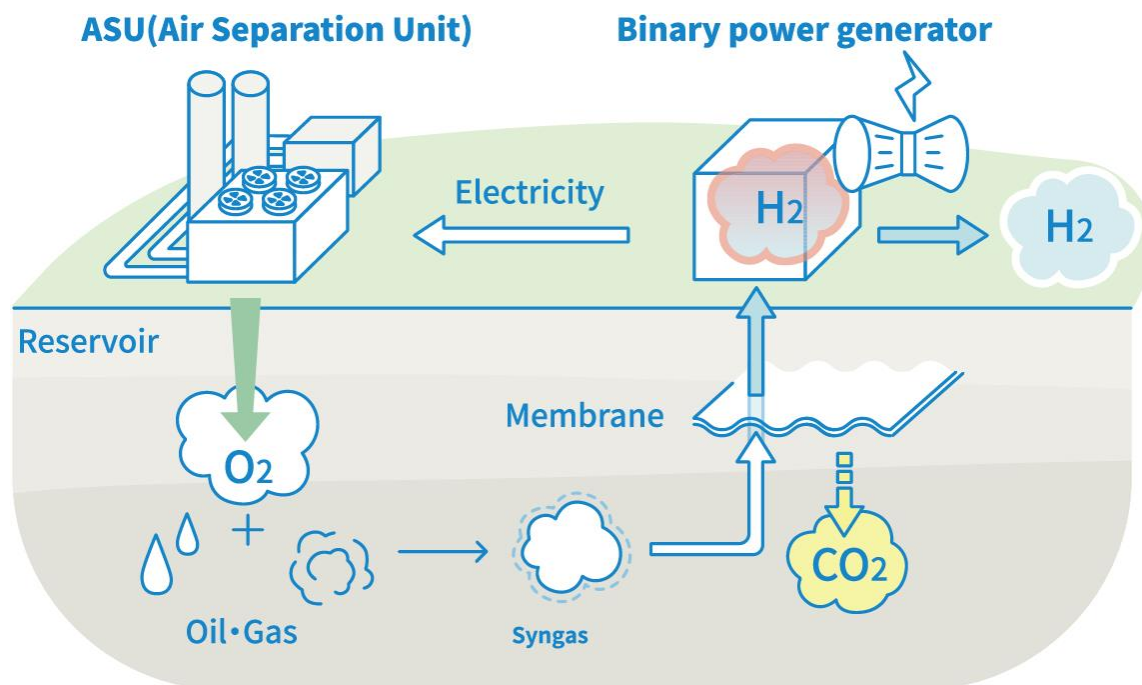


Image of Underground Hydrogen Generation