

JAPEX and JFE Engineering Begin Joint Study regarding Energy Transportation and Supply Infrastructure to Realize a Carbon-Neutral Society

Japan Petroleum Exploration Co., Ltd. (President: Masahiro Fujita, Headquarters: Chiyoda-ku, Tokyo, hereinafter “JAPEX”) and JFE Engineering Corporation (President and CEO: Hajime Oshita, Head office location: Chiyoda-ku, Tokyo) will, in June 2021, start joint study regarding technical challenges related to carbon dioxide (CO₂) and the transportation and supply of new energy such as hydrogen and ammonia in order to realize a carbon neutral society.

To achieve Japanese government goal “carbon neutral by 2050” set forth in October 2020, contributions are required from a wide range of different stakeholders. In particular, commercialization of “carbon recycling that makes effective use of CO₂” and “the use of hydrogen and ammonia, which are expected to be utilized as carbon-free energy,” are expected among private enterprises. Business endeavors are rising, and as a result, verification activities and trials are accelerating.

In response to these movements, JAPEX, which has a wealth of experience in (1) production of oil and gas in Japan, (2) supplying natural gas by combining its high-pressure gas pipeline network and liquefied natural gas terminals, and (3) operating natural gas power plants, and JFE Engineering, which has a wide range of technologies related to the construction of infrastructure such as plants and pipelines, found themselves to be a perfect match regarding how they both intend to achieve a carbon neutral society. JAPEX and JFE Engineering thus agreed to start joint study regarding related technical challenges, with a view to the social implementation of their efforts in the future.

In this joint study, JAPEX and JFE Engineering will use their knowledge and experience to identify and resolve challenges regarding separation, capturing, and transportation of CO₂ through pipelines and so on with a view to future social implementation and commercialization. Furthermore, while taking advantage of our knowledge, JAPEX and JFE Engineering will undertake joint study on technical challenges related to the transportation of hydrogen, including the utilization of existing gas pipelines, and the supply of hydrogen and ammonia as a fuel for power generation.

Based on this joint study, in the future, JAPEX and JFE Engineering aim to separate, capture, and transport CO₂ together with the supply of hydrogen and ammonia, as well as to achieve CCUS (Carbon dioxide Capture, Utilization, and Storage) - including CO₂-IGR/EGR* - in which CO₂ is utilized effectively and injected/stored underground.

Note:

* CO₂-IGR/EGR (Improve/Enhance Gas Recovery) is a technology that efficiently produces residual gas by injecting (storing) CO₂ into natural gas fields where production has declined.

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