

PETRONAS
Sumitomo Corporation
Tokyo Gas Co., Ltd.

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Joint Feasibility Study in Malaysia to establish Supply Chain of Carbon Neutral Methane

PETRONAS, Sumitomo Corporation and Tokyo Gas Co., Ltd agreed to conduct a feasibility study to establish a supply chain of carbon neutral methane* to Japan. The carbon neutral methane will be produced in Malaysia by methanation, using green hydrogen from renewable energy and carbon dioxide.

“Methanation” is the technology to have hydrogen and carbon dioxide chemically reacted to produce methane, which is a major component of city gas. Carbon neutral methane synthesized with the methanation technology will realize the use of high caloric energy by known technics without increasing emission of carbon dioxide from its production up until end usage. This process can also be done by utilizing existing infrastructures such as natural gas liquefaction plant, LNG ocean carrier and city gas supplying facilities. Synthetic methane is gaining popularity as a method to produce gas that is needed for heating, as it contributes positively to de-carbonization in line with the Japanese government’s target to realize “carbon neutrality and de-carbonized society in 2050”.

PETRONAS with its resources and capabilities as a major natural gas solutions provider in the world, Sumitomo Corporation with knowledge of business development in next-generation energies and Tokyo Gas with technologies and plant engineering knowhow related to methanation will join forces to contribute to carbon neutrality by introducing carbon neutral methane as an alternative energy source for the Japan market.

* Note: "Carbon neutral methane" is the methane synthesized by hydrogen produced from renewable energy and CO₂. CO₂ emitted when carbon neutral methane is used (combusted) and CO₂ separated or captured will be offset and therefore the amount of CO₂ emission will not increase by the use of this gas produced by methanation.

Supply Chain of Carbon Neutral Methane

