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### **ENEOS Begins Collaborative Studies and Researches with PETRONAS Group toward the Development of a CO<sub>2</sub>-Free Hydrogen Supply Chain**

ENEOS Corporation (President: Ota Katsuyuki; "ENEOS") announces that it has concluded a Memorandum Of Understanding (MOU) with PETRONAS Gas & New Energy Sdn Bhd (PGNESB), a wholly owned subsidiary of Malaysia's national petroleum company Petroliaam Nasional Berhad ("PETRONAS"), to conduct collaborative studies and researches toward the development of a CO<sub>2</sub>-free hydrogen supply chain.

In anticipation of a hydrogen-oriented society toward decarbonization, ENEOS is striving to develop a CO<sub>2</sub>-free hydrogen supply chain in Japan and overseas. Outside Japan, we expand wide range of alliances in Australia, Middle East and Asia to implement verification for the realization of a large-scale supply of cost-competitive hydrogen.

As a part of these initiatives, ENEOS plans to conduct a study for collaboration with PGNESB. The two companies will look into a business which converts hydrogen produced in Malaysia into methylcyclohexane ("MCH")\*, an organic hydride as a form of efficient hydrogen storage and transport, and transports MCH to ENEOS refineries. Together, both ENEOS and PGNESB will be studying hydrogen production in Malaysia, conversion of hydrogen to MCH and shipping of MCH to Japan. ENEOS will also study reconversion of MCH back to hydrogen at ENEOS refineries to supply hydrogen to end-users such as power plants and steel plants.

In this study, PGNESB will utilize co-product hydrogen at PETRONAS petrochemical plants. The plants are expected to serve as a highly stable and feasible supply source of hydrogen with their high potential in the production of co-product hydrogen. In addition, green hydrogen derived from renewable energy and blue hydrogen produced from fossil fuels with net zero CO<sub>2</sub> emissions by capturing and storing CO<sub>2</sub> (CCS) will also be considered. As part of the MoU, both parties will also explore other hydrogen production projects opportunities outside of Malaysia.

ENEOS will actively utilize government support, including the Green Innovation Fund in Japan to achieve early development of a CO<sub>2</sub>-free hydrogen supply chain.

This initiative is consistent with United Nations Sustainable Development Goals (SDGs) 7. Affordable and clean energy, 9. Industry, innovation and infrastructure, and 13. Climate action. ENEOS is contributing to the stable and efficient supply of low-carbon energy through development of CO<sub>2</sub>-free hydrogen supply chains including the study with PGNESB.

\* Ambient liquid with a mass of 1/500 of gaseous hydrogen. Easy to handle, store, transport, etc.

<Overview of potential collaboration>

