



July 1, 2026
ENEOS Xplora Inc.

Pilot Study on Sludge Generated in Natural Gas Production
Begins an Upcycling Initiative in Collaboration with Mitsubishi Gas Chemical Next

ENEOS Xplora Inc. ("Xplora") is pleased to announce that it has commenced an initiative at its Nakajo Office*¹ (Tainai City, Niigata Prefecture) to promote the recycling of waste sludge generated during the natural gas production process by providing sludge samples to a pilot study conducted by Mitsubishi Gas Chemical Next Company, Inc.

In this pilot study, Mitsubishi Gas Chemical Next Company, Inc. will utilize its resin product technologies to explore whether the waste sludge can be used as a part of materials for upcycling*² into molded products such as building materials and furniture. Xplora has conducted oil and natural gas production at the Nakajo Office for more than 70 years. Throughout long history, sludge generated during the production process has been treated and disposed of as industrial waste. As such sludges are continuously generated as part of routine operations, it has been an ongoing challenge to reduce and use more effectively of sludge while ensuring proper treatment. This pilot study is intended to assess whether such sludge destined for disposal can be utilized as a resource with added value instead.

This initiative is being undertaken as part of the activities of the Nakajo Open-innovation Lab (NOiL), an open innovation hub established at the Nakajo Office to create business through collaboration with partners from industry, government, and academia.

In addition to ensuring a stable supply of energy, we are committed to reducing environmental impact at its oil and natural gas production sites. This initiative is aligned with ENEOS Group's policy on the proper management and recycling of waste. By leveraging the knowledge gained from this study, ENEOS Xplora will continue to advance initiatives aimed at contributing to the realization of a circular economy.

*¹ Established in 1956, it discovered water-dissolved natural gas reservoirs (1957), non-associated natural gas reservoir (1961), and an oil reservoir (1978). The presence of these three different types of reservoirs in proximity is rare, and the fields have therefore been regarded as a "textbook" field and used as a training site for engineers from overseas.

*² Upcycling refers to the process of adding new value to materials that would otherwise be discarded, transforming them into upgraded products.

Overview of the Pilot Study

Pilot Study Operator: Mitsubishi Gas Chemical Next Company, Inc.

Industrial Waste Used / Provider: Inorganic sludge / ENEOS Xplora Inc.

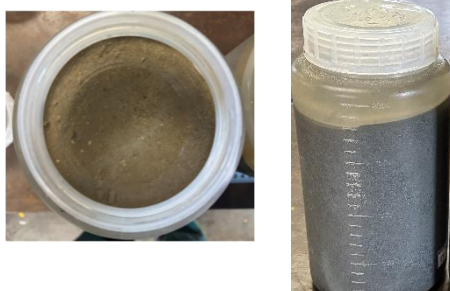
Objective: To verify the feasibility of using the sludge as a thermosetting plastic material primarily composed of unsaturated polyester resin

Study Period: Through the end of September 2026 (planned)

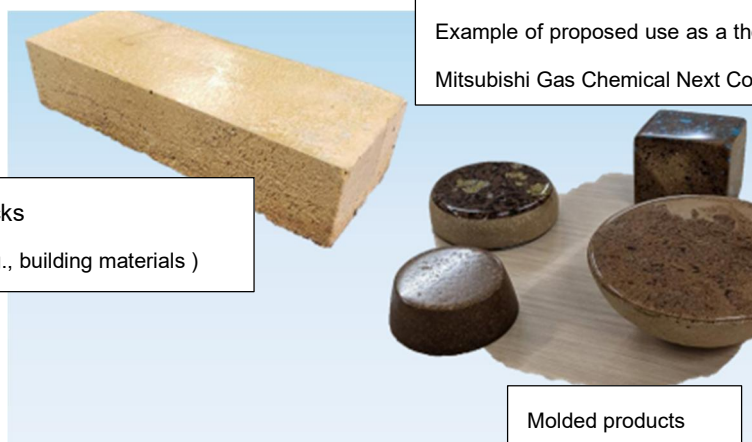
Images illustrating the process from sludge generation to upcycling



Production Facility (Generation of sludge during production)



Collected Sludge



Blocks
(e.g., building materials)

Example of proposed use as a thermosetting plastic material from the Mitsubishi Gas Chemical Next Company, Inc.

Molded products