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News Release

Commercialization of the Localized Renewable Energy Supply Scheme to Shin-Etsu Chemical Group in Thailand Utilizing Biomass CHP System

Nippon Steel Engineering Co., Ltd. (President: Yukito Ishiwa, Headquarters: Shinagawa-ku, Tokyo; hereinafter referred to as "NSE") and Osaka Gas Co., Ltd. (President: Masataka Fujiwara; Headquarters: Chuo-ku, Osaka; hereinafter referred to as "OG") are pleased to announce that NS-OG Energy Solutions (Thailand) Ltd. (President: Tatsuya Kinoshita; hereinafter referred to as "NSET"), the jointly invested subsidiary company of NSE and OG*1, has successfully commercialized a renewable energy supply scheme (hereinafter referred to as "the Project") utilizing biomass Combined Heat and Power (CHP) systems (hereinafter referred to as "the Facility") to supply energy to three companies of the Shin-Etsu Chemical (hereinafter referred to as "SEC") Group in Rayong Province, Thailand: Shin-Etsu Silicones (Thailand) Limited (hereinafter referred to as "SEST"), Asia Silicones Monomer Limited (hereinafter referred to as "ASM") and Shin-Etsu New Materials (Thailand) Limited (hereinafter referred to as "SENT").

In this Project, NSET will install the Facility (average power generation capacity: 5.0 MW and an average steam supply capacity:40 t/h) on SEST's premises. Utilizing wooden chips*2 sourced locally from Thailand as fuel, the Facility will generate renewable energy in the form of electricity and steam, which will be supplied to SEST, ASM, and SENT. NSET will offer a one-stop service, covering the engineering, installation, ownership, biomass fuel procurement, and operation & maintenance of the Facility*3, which ensures SEC Group benefit from a reliable supply of renewable energy without the burden of initial investments or the labor-intensive system operation & maintenance.

To implement this Project, NSE, NSET, and the SEC Group have collaborated to develop strategies that promote carbon neutrality in the SEC Group's operations in Thailand. By leveraging advanced technologies and expertise in waste-to-energy power generation and biomass fuels, which have been developed by NSE and the Daigas Group*4 in Japan, the Project introduces a localized energy production and consumption model using biomass CHP systems at the SEC Group's production sites in Thailand. The Project is expected to contribute to an annual reduction of approximately 48,000 tons of CO_2 emissions.

Additionally, the Project has been adopted for the FY2024 Joint Crediting Mechanism (JCM) Financing Program for Equipment Subsidy Projects"*5 by Ministry of the Environment of Japan. By utilizing biomass fuel sourced from Thailand in the CHP systems, the Project establishes a localized energy production and consumption model. Notably, it marks the first initiative under the JCM Financing Program to supply renewable energy generated from Thailand-sourced wood chips to customer facilities, rather than for self-consumption.

About NSE and NSET

NSE and NSET will leverage their engineering expertise developed through the construction and operation & maintenance of various energy plants, alongside know-how gained from own experience as retail electricity providers. NSE and NSET together strive to advance a sustainable society through efforts to achieve carbon neutrality in both Japan and abroad.

About the Daigas Group

The Daigas Group announced its Carbon Neutral Vision in January 2021, followed by the release of its Energy Transition 2030 plan in March 2023. The Group is committed to advancing technologies and services that suport a carbon-neutral society while addressing social issues, including climate change. By utilizing its expertise in gas sales and energy supply, the Group aims to contribute to CO_2 emissions reduction in both Thailand and Japan.

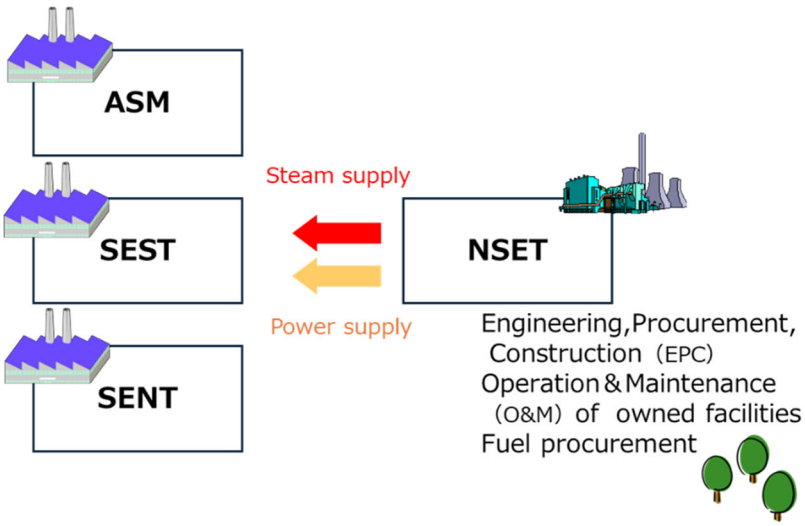
*1 OG invests in NSET through its wholly owned subsidiary, Osaka Gas Singapore Pte. Ltd.

*2 The primary biomass fuel for the project will be rubberwood, as Thailand ranks among the top three producers of natural rubber globally. A significant amount of wood waste is generated during the large-scale replanting of rubber trees, which occurs approximately every 15 years (Source: website of The National Museum of Emerging Science and Innovation). This project aligns with Thailand's national policy to promote the effective utilization of rubberwood waste as a biomass resource, which has previously had limited applications.

*3 NSET offers a one-stop service in Thailand for Japanese-affiliated factories, covering the planning, engineering, procurement, and construction (EPC) of energy supply facilities, as well as the ownership, fuel procurement, O&M of such facilities. Currently, NSET operates five facilities in Thailand. The company has received high recognition for its operational management technologies for highly efficient and stable cogeneration systems. Notably, NSET was the first overseas company to receive the "Cogeneration Grand Prize 2018 - Chairman's Award" from the Advanced Cogeneration and Energy Utilization Center of Japan.

*4 The Daigas Group is the group brand of OG.

*5 The JCM is a program that leverages advanced decarbonization technologies to implement projects aimed at reducing greenhouse gas (GHG) emissions in developing countries. These projects include monitoring, reporting, and verification (MRV). The JCM is intended to help Japan and its partner countries achieve their GHG emissions reduction targets while simultaneously reducing GHG emissions in developing countries. The program provides subsidies that covers up to 50% of the initial investment costs for projects employing advanced decarbonization technologies. This project is being conducted under the cooperation of the governments of Thailand and Japan.



< Conceptual Framework of the Project Scheme>

【For more information, please contact below】

Nippon Steel Engineering Co., Ltd.

URL: https://www.eng.nipponsteel.com/en/enquete/all/

Daigas Group

URL: https://www.osakagas.co.jp/