

OSAKA GAS (THAILAND) and Parfun Sign CNG Agreement
Switching Fuel from Coal to Natural Gas to Reduce CO₂ Emissions in Thailand

October 1st, 2021

Osaka Gas Co., Ltd.

OSAKA GAS (THAILAND) CO., LTD.

Osaka Gas Co., Ltd. (Osaka Gas) today announced its subsidiary OSAKA GAS (THAILAND) CO., LTD. (OGT) signed a Sale and Purchase Agreement on September 30th, 2021, with Parfun Textile Co., Ltd. (Parfun), a subsidiary of Parfun Co., Ltd., for the delivery of compressed natural gas (CNG) to Parfun's garment factory in Thailand.

Prior to the start of its CNG supply to the factory in July 2022, OGT will install a CNG supply system and gas-fired once-through boilers at the Parfun's factory to replace the existing coal-fired water tube boilers for fuel conversion from coal to natural gas.

This is Osaka Gas's first project in which it serves as a representative operator¹ under the Financing Programme for JCM² Model Projects³. It is also OGT's first project which receives a subsidy under the Programme.

This project is being developed following a feasibility study⁴ on garment factory CO₂ emissions reduction which was originally conducted by the City of Osaka and the Eastern Economic Corridor (EEC)⁵ Office of Thailand and later joined by Osaka Gas.

With OGT's long-term CNG supply via trailer truck and the operation of high-efficiency⁶ gas-fired boilers, the project aims to reduce greenhouse gas (GHG) emissions at Parfun's garment factory by approximately 2,665 t-CO₂ per annum⁷. This reduced GHG amount will be counted as a carbon credit under the JCM scheme, which will contribute to the efforts to meet the emissions reduction targets in Japan and Thailand respectively.

OGT has been introducing CNG delivered via trailer truck to convert fuel from coal and oil to natural gas in industrial areas where access to natural gas pipelines is limited. OGT plans to expand its fuel conversion target areas in Thailand including Nakhon Pathom Province, where Parfun's garment factory is located. This project is the first fuel conversion from coal to natural gas for OGT.

¹ This project was selected for the Financing Programme for JCM Model Projects in FY2021 by the Japanese Ministry of the Environment on August 30, 2021.

² Joint Crediting Mechanism (JCM): In this bilateral mechanism, Japan provides developing countries with leading low-carbon technologies and products, systems, services, and infrastructures, which contribute to sustainable development in these countries by reducing greenhouse gas emissions. With JCM projects, both countries are able to benefit from reduced emissions. Japan's efforts to reduce greenhouse gas emissions can be evaluated quantitatively through JCMs, which allow Japan to apply JCM credits to meet its emissions reduction targets.

³ Financing Programme for JCM Model Projects in FY2021: JCM Model Projects utilize leading decarbonization technologies to lower GHG emissions in developing countries through measurable, reportable, and verifiable (MRV) actions. In addition to reducing GHG emissions in developing countries, JCM projects aim to help Japan and its partner countries achieve their GHG emissions reduction targets. The Financing Programme for JCM Model Projects will fund up to half of the initial investment costs for advanced decarbonization technologies.

⁴ As part of the City-to-city Collaboration Programme, this feasibility study was commissioned by the Ministry of the Environment of Japan (MOEJ) to support effective and efficient initiatives for building low-carbon and decarbonized society models, which are undertaken by Japanese municipalities with expertise on constructing these models and partner cities outside Japan.

⁵ Located in the east of Bangkok, Chachoengsao Province, Chonburi Province, and Rayong Province are included in the special economic zone under the Thailand 4.0 polity.

⁶ The efficiency is 98%.

⁷ The reduction of GHG emissions is calculated using the methodologies approved in JCM partner countries. This project is expected to reduce CO₂ emissions by approximately 14,535 t-CO₂ per annum with the high-efficiency gas-fired once-through boilers, which will be installed to replace the existing coal-fired water tube boilers.

(Attachment)

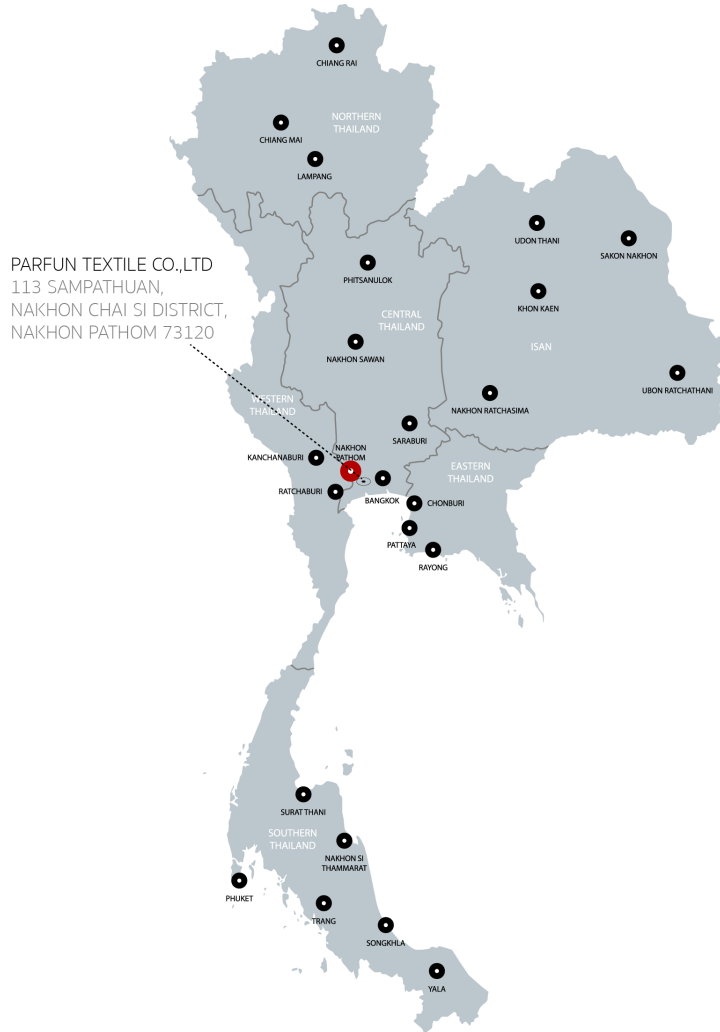
1, Project overview

■ Equipment to be installed: Gas-fired once-through boilers

Steam Supply Capacity 3,000 kg/h per unit (converted evaporation amount)

Number of Units	4
Supplied Fuel	Compressed natural gas (CNG)
Estimated GHG Reduction	2,665t-CO ₂ /year
COD	July 2022 (planned)

■ Location and Exterior of Installation Sites



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•Parfun's garment factory in Nakhon Pathom



- Mr. Hidekazu Fujii, President, Parfun Textile Co., Ltd. (right) and Mr. Katsumine Sato, Associate Director, Asia Energy Business Development, Osaka Gas Co., Ltd. (left)



2, Participating Companies

[Company Overview: OSAKA GAS (THAILAND) CO., LTD.]

Established	October 2013
Location	55 Wave Place Bldg. 10th Fl., Unit 10 04 Wireless Rd. Lumpini, Pathumwan, Bangkok, 10330 Thailand
Representative Director	Shunsaku Nakai
Ownership	Osaka Gas Singapore Pte. Ltd. ⁸ 49% SBCS Co., Ltd. 19% SMBC MANAGEMENT SERVICE CO., LTD. 12% MHC B Consulting (Thailand) Co., Ltd. 10% Bangkok BTMU Limited 10%
Main business	<ul style="list-style-type: none"> • One-stop energy services for industrial customers in Thailand • Energy business including research, development and investment.

⁸Osaka Gas' wholly-owned subsidiary in Singapore