

People’s Republic of Bangladesh

FY2021 Ex-Post Evaluation Report of Private-Sector Investment Finance
“Moheshkhali Floating Storage and Regasification Unit Operation Project”

External Evaluator: Tomoo Mochida, OPMAC Corporation

1. Project Description



Project Location



FSRU off the coast of Moheshkhali

1.1 Project Outline

Against the background of Bangladesh's economic growth and industrialisation, electricity and energy supply did not kept pace with demand, and in 2015, actual supply fell short of potential demand for both electricity and natural gas. While electricity and energy demand was expected to increase further over the next decade, domestic natural gas production was expected to peak in 2016 and then decline. Therefore, the promotion of primary energy imports, including Liquefied Natural Gas (hereinafter referred to as “LNG”) imports, was identified as one of the priority issues to meet the widening gap between natural gas supply and demand.

The project was designed to improve the tight primary energy supply and demand situation in Bangladesh by chartering and operating the country’s first Floating Storage and Regasification Unit (hereinafter referred to as “FSRU”) of LNG to supply natural gas, and by constructing related facilities off the coast of Moheshkhali, in the south-east of the country, thereby contributing to the promotion of economic growth.

2. Outline of the Evaluation Study

2.1 External Evaluator

Tomoo Mochida, OPMAC Corporation

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: November 2021 - February 2023

Duration of the Field Study: March 12, 2022 - April 1, 2022

3. Results of the Evaluation

The project was designed to improve the tight primary energy supply and demand situation in Bangladesh by chartering and operating the country's first FSRU of LNG to supply natural gas, and by constructing related facilities off the coast of Moheshkhali, in the south-east of the country, thereby contributing to the promotion of economic growth. The results of the ex-post evaluation were summarized below.

Relevance : The Government of Bangladesh aimed to become a middle-income country by 2030 at the time of appraisal and is aspiring to enter a status of a high-income country by 2041 at the time of the ex-post-evaluation. Therefore, the importance of natural gas in energy as a driving force for development remained unchanged for the Government of Bangladesh. With a predicted decline in domestic natural gas production, the commencement of LNG imports was perceived to contribute to the smooth supply of natural gas and the diversification of primary energy. This policy direction has not changed and is consistent with development needs. However, there is room for improvement in the project design in terms of how the project objective is described and indicators are set.

Coherence: The project was consistent with one of the areas specifically emphasized in Japan's aid policy, which focuses on "accelerating economic growth that all people can benefit from, with the aim of becoming a middle-income country" and which places power and energy shortages as the biggest obstacle to economic growth in Bangladesh. The project was found to be well associated with other JICA-assisted projects from the perspective of internal coherence and was identified as being effectively associated with another FSRU project and the government's project to construct a pipeline to transport regasified gas from the perspective of external coherence with projects funded by organizations other than JICA. Concrete results were also confirmed from the latter perspective.

Efficiency: Although the project period was slightly longer than planned, the project scope was achieved as originally planned and the project costs were within the plan.

Effectiveness: The volume of LNG imported and the level of the maximum regasification capacity were achieved by Excelerate Energy Bangladesh Limited (a special purpose company established for the construction of FSRU-related facilities and the operation of the FSRU, hereinafter referred to as "SPC"), the borrower and implementing entity. The LNG import volume having been regasified at the equipment and facilities of the project accounts for a high percentage of the country's total LNG imports. These results are considered to be contributing to the

improvement of primary energy supply and demand.

Impacts: Companies located in Chattogram (formerly Chittagong), where the survey was conducted, have experienced a stable gas supply with few interruptions since the start of the commercial operation of the FSRU. Although the number of companies surveyed is limited, the contribution of the project to an increase in fertilizer production and power generation volume of companies, one of the beneficiary groups of the project, and the promotion of economic development can be seen. The use of natural gas, which has a relatively low environmental impact, has been pointed out as contributing to the mitigation of climate change, while the measurement of greenhouse gas (GHG) emissions throughout the lifecycle, including the liquefaction and transport stages, has also been discussed as an important aspect to be considered. Therefore, it is not possible to determine that the environmental impact is generally low. However, for Bangladesh, which relies heavily on coal and oil imports, the use of natural gas is linked to a reduction in the use of other fuels that emit GHGs. It is also considered that the negative environmental impact of project implementation was adequately addressed.

Sustainability: The operation and maintenance of the project after completion has been being carried out by the SPC, which was established for the construction of FSRU-related facilities and the operation of the FSRU. No issues affecting the sustainability of the project effects have been observed in the policy and system, institutional/organizational, technical and financial aspects including the current status of operation and maintenance. Regarding Environmental and social aspects, continued consultations will be held, and preventive measures have been taken with regard to risks related to the realization of development effects, such as country and political risks, production and operation risks, and market risks.

END

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