

Ex-Ante Evaluation

1. Name of the Project

Country: The People's Republic of Bangladesh

Project: Moheshkhali Floating Storage and Regasification Unit Operation Project

Loan Agreement: June 23, 2017

Borrower: Excelerate Energy Bangladesh Limited (a SPC established in Bangladesh for this project)

2. Background and Necessity of the Project

In Bangladesh, power and energy demand has exceeded supply due to over 6% average economic growth over the past ten years and the progress in industrialization associated with this economic growth. In 2015, the maximum power supply was 8,177 MW (gas fuel sources accounted for over 90%) against a potential demand of 9,000 MW, and the natural gas supply, which accounts for the majority of primary energy, was only 2,200 millions of standard cubic feet per day (hereinafter referred to as "mmscfd") against a potential demand of 3,000 mmscfd. Over the next ten years, power and energy demand is expected to increase at an annual rate of nearly 10%, while domestic natural gas production is expected to decline after peaking in 2016. Thus, the diversification of energy supply sources, including imports of liquefied natural gas (hereinafter referred to as "LNG"), is an urgent issue. In the Seventh Five-Year Plan (FY 2016/17 to FY 2020/21) which is placed at the top of the National Development Strategy, the electricity and energy sector is positioned as the most important sector in Bangladesh, which aims to join middle-income countries by 2021. In addition, in order to respond to the growing gap between the supply and demand for natural gas, the Power and Energy Master Plan 2016 by the Ministry of Power, Energy and Mineral Resources cites the promotion of primary energy imports as one of its top priorities. It plans to import 1,000 mmscfd of LNG by 2025 using a floating storage and regasification unit (hereinafter referred to as "FSRU") in the vicinity of Moheshkhali, which is one of the few areas in Bangladesh where large LNG carriers can anchor. In the long term, it plans to construct a large-scale land base LNG terminal and an coal terminal. Thus, the Moheshkhali Floating Storage and Regasification Unit Operation Project (hereinafter referred to as the "Project") is consistent with Bangladesh's development policy.

Japan's Country Assistance Policy for the People's Republic of Bangladesh (2012) describes accelerating economic growth that can benefit all citizens toward the country's transition to middle-income status as a priority area, and positions the power and energy shortage as the biggest obstacle in achieving economic growth. In response to this, the JICA Country Analysis Paper for Bangladesh (April 2013)

describes securing stable power and energy supplies as a priority task.

The Project is consistent with Bangladesh's issues and development policy, as well as the cooperation policies of the Government of Japan and JICA, and is considered to contribute to SDG 7 (Energy). Thus, the significance for JICA in supporting the Project through a Japanese ODA Loan is substantial.

3. Project Description

(1) Project Objective

The object of this Project is to improve the tight primary energy supply and demand in Bangladesh by chartering and operating the FSRU for the supply of natural gas and constructing related facilities (offshore cargo handling facilities, undersea pipeline, and land reception facilities) off the coast of Moheshkhali in southeastern Bangladesh, thereby contributing to the promotion of economic growth in the country.

(2) Project Site / Target Area

Off the coast of the Moheshkhali region, Cox's Bazar District, Chittagong Division, People's Republic of Bangladesh

(3) Project Description

The borrower will charter and operate the FSRU with 500 mmscfd regasification capacity, and construct related facilities, under a 15-year concession agreement with the National Oil, Gas and Mineral Corporation (Petrobangla).

(4) Schedule

A loan agreement was executed in June 2017, and the completion of construction and start of operation are scheduled to begin in 2018.

(5) Environmental and Social Consideration / Poverty Reduction / Social Development

1) Environmental and Social Consideration

① Category: B

② Reason for Categorization: The project is not considered to be a large-scale Natural Gas Development, Oil and gas pipelines nor Ports project, is not located in a sensitive area, and has none of the sensitive characteristics under the JICA guidelines for Environmental and Social Considerations (April, 2010), it is not likely to have significant adverse impact on the environment. 2) Promotion of Poverty Reduction: None in particular.

3) Promotion of Social Development: None in particular.

(6) Collaboration with Other Donors: Co-financing with IFC, CDC, FMO, DEG

(7) Other Important Issues: N/A

4. Targeted Outcomes

As quantitative effects, LNG import and supply by the FSRU (m³), maximum

vaporization capacity of the FSRU (mmscfd), and FIRR are measured. As qualitative effects, it is expected to mitigate climate change impacts through the promotion of economic development and the use of natural gas with less environmental impact.

(1) Indicators to be Used:

- 1) LNG import and supply by the FSRU (m³)
- 2) Maximum regasification capacity of the FSRU (mmscfd)
- 3) FIRR

(2) Timing: Two years after the start of operations

5. External Factors and Risk Control

None in particular.

6. Lessons Learned from Past Projects

(1) Lessons Learned from Past Projects: The results of the ex-post evaluation of the Anpara Transmission Line Construction Project for India revealed that it is necessary to pay attention to progress management in order to align the time of completion of the concerned project with that of related infrastructure projects so as not to negatively affect targeted outcomes.

(2) Application of Lessons Learned to the Project: In the Project, the National Oil, Gas and Mineral Corporation is obligated to construct a 91 kilometer-long pipeline between Moheshkhali and Chittagong to connect the gas supplied by the borrower to the existing domestic gas pipeline. During the review, we checked the progress of the pipeline construction in cooperation with IFC, and confirmed that the pipeline had already been completed, so there are no major concerns for implementing the Project.

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