

| |
|-------------------------------------|
| Ex-post Evaluation Report 2016-3 |
|-------------------------------------|

**Ex-Post Evaluation on the Intensification &
Expansion of Distribution System 2nd Phase / Part
A Project**

The Export-Import Bank of Korea

(Government Agency for EDCF)

EDCF Evaluation Team

(Evaluated by Global Development Cooperation Consulting)

This Evaluation was entrusted to Global Development Cooperation Consulting by EDCF for the purpose of independent evaluation research. The opinion, findings and conclusion or recommendations expressed in this report are those of the external evaluator and do not necessarily reflect the view of EDCF.

I. Project Overview

1. Project Details

Name of the Project: Intensification & Expansion of Distribution System 2nd Phase / Part A Project

Name of the Borrower: Ministry of Finance, Bangladesh

Execution Agency: Bangladesh Rural Electrification Board (BREB)

Amount of Loan:

- An amount in Korean Won in the equivalent of 20 million US dollars was the planned project budget. With the purchasing plan modification, an amount in Korean Won not exceeding the equivalent of 15.6 million US dollars was spent.

Terms of Loan:

- Interest rate: 1.0% per annum
- Repayment period: 30 years including a grace period of 10 years

2. Project Purpose

The purpose of the project was to expand the rural distribution system to provide stabilized electricity, create employment, and increase income in order to achieve balanced inter-regional economic development.

3. Project Scope

The project aimed to provide equipment necessary for the expansion of electricity distribution networks of 33 of the 64 Palli Bidyut Samity

(PBS), which are rural electricity associations in Bangladesh.

<Project Scope>

| Criteria | Detail | Standard | Amount |
|----------------|---|-----------|----------|
| Transmission | Repair existing transmission lines | 33KV | 6 Sites |
| Transformation | Install access materials and transformer for expansion of existing substation | 1,666KVA | 12 Units |
| | | 3,333KVA | 12 Units |
| Distribution | Repair and construct distribution networks | 220V-33KV | 2,000km |

II. Introduction

- As the electrification ratio of the 64 PBS merely reached 35%, Bangladesh was in dire need of expanding electricity distribution when its Ministry of Finance requested Korea's assistance for the mentioned project in July 1997.

- The loan contract was established in 2004 and the construction project was completed in 2007, taking 5 months less than the original schedule.
 - The loan agreement was signed in March 2004, delayed from the planned date of March 2001. The final fund execution date was also delayed from September 2005 to October 2009.

- (Project Target Area) The Bangladesh Rural Electrification Board (BREB), the project executing organization, selected 33 out of 64 PBS in the nation as project target areas where electricity demand has rapidly increased due to 1) high natural population growth rate, 2) high level of deterioration, and 3) Export Processing Zone (EPZ) development.

- (Project Detail) Although the purchasing plan was modified due to the delay in the project's progress, the project produced the originally planned outcomes of 1) repairing transmission lines, 2) installing the expansion transformer for substations, and 3) repairing and newly constructing distribution networks.

III. Summary of the Ex-post Evaluation

1. Purpose of Evaluation

- The purpose of this evaluation was to analyze the attainability of project goals, project outcome, and project sustainability in order to draw lessons and recommendations for similar prospective projects in the future.

2. Methods of Evaluation

- This ex-post evaluation was performed based on the five OECD DAC criteria (relevance, efficiency, effectiveness, impact, and sustainability) and cross-cutting issues¹⁾. Furthermore, the triangulation method was used to deduct highly feasible results and to verify the criteria.
- To achieve the independence and integrity of the evaluation process, the evaluation team complied with the following guidelines: the Evaluation Guidelines of EDCF Ex-Post Evaluation and the EDCF Evaluation Manual.

3. Results of Evaluation

- (Overall) The project is evaluated as successful according to the evaluation guidelines provided by EDCF. The overall result of the evaluation was 3.64 points out of 4 points, as shown in the table below.

1) Cross-cutting issues are the issues for which all EDCF projects should be evaluated. This category includes environmental, gender, minority issues, AID/HIV, and relocation of people.

<Evaluation Result Overview>

| Criteria | Evaluation Factors | Detailed Factors | Score |
|--------------------------------|-------------------------------------|--|-------------|
| Relevance | Policy and Strategy Relevance | Relevance with EDCF Assistance Strategy | 3 |
| | | Relevance with Bangladesh Distribution Networks Policy | 4 |
| | Adequacy of Project Plan | Feasibility of Project Goals | 4 |
| | | Feasibility of Project Design | 4 |
| | Recipient Country Participation | Recipient Country Participation | 4 |
| Overall Relevance Score | | | 3.8 |
| Efficiency | Plan vs Actual | Planned vs Actual Project Duration | 2 |
| | | Planned vs Actual Project Budget | 3 |
| | Risk Management | Risk Management | 3 |
| | Overall Efficiency Score | | |
| Effectiveness | Outputs | Achievement of Outputs | 3 |
| | Short-term Outcomes | Good Operation of Equipment | 4 |
| | | Reduction of Distribution Loss | 4 |
| | | Reduction of Power Blackouts | 4 |
| | Overall Effectiveness Score | | |
| Impact | Mid- & Long-term Outcomes & Impact | Policy Impact on Project Implementing Organization | 4 |
| | | Improve Electricity Service | 4 |
| | Impact Overall Score | | |
| Sustainability | Sustainability | Financial Sustainability | 4 |
| | | Human-Technical Sustainability | 4 |
| | Overall Sustainability Score | | |
| Overall Average Score | | | 3.64 |

□ (Relevance) The project is evaluated as highly relevant (3.8/4.0); the project was well-aligned with the Bangladesh distribution network policy and coincided with strong participation from Bangladesh. While the results showed relatively low relevance with EDCF's assistance strategy, it is important to note that there was a limitation in evaluating relevance with EDCF assistance strategy because the evaluation was conducted before the mid-term management strategy was implemented.

- (Efficiency) The evaluation of efficiency showed that the project scored 2.67/4.0, indicating the project was somewhat efficient. While the project implementation duration was reduced, the actual implementation period was delayed due to a delay in loan contract signing. Moreover, as the number of equipment on the purchase list was reduced due to the increase in equipment costs, the project budget decreased relative to the project plan.

- (Effectiveness) The project showed high effectiveness with an overall score of 3.75/4.0. While the project achieved outcomes different from the original plan, it did not negatively affect the evaluation because the project adapted to the changing external environment during project implementation and respected the recipient country's project direction.

- (Impact) It was evaluated that the project had high impact with an overall score of 4.0/4.0. Since the implementation of the project, BREB had been certified by an internationally recognized quality management system.
 - As PBS has also begun the “One Point Service” and satisfaction surveys to improve the quality of public service, it is concluded that the project under evaluation has very high impact on the local community.

- (Sustainability) The project was evaluated to have high sustainability with an overall score of 4.0/4.0. BREB, the project executing agency of this project, verified its financial stability through an external audit report.

- As BREB institutionalized PBS & the Training Department to manage and develop PBS and train employees in order to increase human resources and technical sustainability, the project had very high sustainability.

IV. Lessons and Recommendations

1. Lessons

Success Factors

- As part of BREB's Rural Electrification Program, this project is well-aligned with other projects of the program to bring positive long-term effects, such as providing stable electricity to the local communities.
- As BREB has accumulated experience in implementing multiple projects with loans from various institutions since its establishment in 1977, it is successfully managing the distribution networks with the new equipment.

Limitations

- Due to the regime change in the recipient country, the loan agreement for the project was delayed from March 2001 to March 2004. As a result, equipment prices increased which created the need to modify the project's purchasing plan.

2. Recommendations

- According to the ex-post evaluation in 2016, the agricultural electricity sector in Bangladesh has been growing rapidly since EDCF carried out appraisal. This indicates that providing EDCF loans to countries that demand assistance in the agricultural electricity sector is highly feasible which would bring positive achievements.
- While the operation and maintenance works of BREB, the project implementing organization, are important to enhance the project's

sustainability, there is also a growing need to provide ex-post management, such as supplying equipment components and repairing services for a specific period of time, due to the nature of the equipment assistance project.