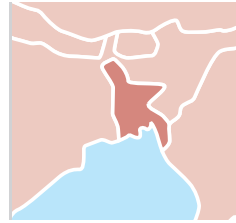




Asia Bangladesh



# Power Distribution and Efficiency Enhancement Project

Contributing to improvements in the living conditions of residents and development of regional economies through rural electrification and rehabilitation of urban power distribution systems

## [External Evaluator]

Kenji Momota, IC Net Limited

## Rating

Effectiveness, Impact	a	Overall Rating <b>B</b>
Relevance	a	
Efficiency	b	
Sustainability	b	

## Project Objectives

Objectives of the 2 subprojects that constitute this project are as below:

### (1) Rural Electrification Project

To promote electrification and enhance the efficiency of facilities in Munshiganj and Sunamganj by establishing Palli Bidyut Samity (PBS, i.e., electrification cooperative) and constructing and/or rehabilitating power distribution systems in the target regions, thereby contributing to improving socioeconomic conditions and developing regional economies in the target regions.

### (2) System Loss Reduction Pilot Scheme

To reduce system loss and develop designing and O&M capacity of executing agencies in six feeders selected in four areas (Chittagong, Mymensingh, Rajshahi, and Khulna) under the jurisdiction of the Bangladesh Power Development Board (BPDB) and the two areas (Dhanmondi and Jurain) under the jurisdiction of the Dhaka Electricity Supply Authority (DESA), by the rehabilitation of power distribution networks and installation of watt-hour meters for measurement, and, based on the result, to formulate a nationwide implementation plan, thereby contributing to a stable supply of electricity and the development of regional economies.

## Outline of the Loan Agreement

- Loan amount / Disbursed amount: 4,376 million yen / 4,003 million yen
- Loan agreement: July 1999
- Terms and conditions: 1% interest rate; 30-year repayment period (including a 10-year grace period); general untied
- Final disbursement date: September 2007
- Executing agencies: Rural Electrification Board (REB), Bangladesh Power Development Board (BPDB), Dhaka Electricity Supply Authority (currently reorganized as Dhaka Power Distribution Company Limited)
- Website URL: <http://www.reb.gov.bd/>

## Map of Project Sites



## Effects of Project Implementation (Effectiveness, Impact)

This project has largely achieved its objectives, and its effectiveness is high. The condition of the facilities developed under the project are good, and the system loss rate has greatly improved from 46% to roughly 11-13%. The number of electrified households has grown to approximately 200,000 in total in Munshiganj and Sunamganj, and the electrification rate has reached 60-70%. The rate is expected to grow further when the transfer of control over the power distribution facilities currently owned by the Bangladesh Power Development Board (BPDB) is carried out.

The findings of the beneficiary survey indicate that some 80-90% of the respondents appreciate improvements in their living environment due to electrification, such as shortened cooking time and increased study time. At the same time, the growth of agriculture and industries has been seen in the target regions. Electrification has enhanced regional economic activities, as seen by the construction of cold storage facilities for agricultural products.

On the other hand, the improvement of power distribution systems in six districts in urban areas has greatly reduced the rate of power loss from about 30-70% before the implementation of the project to some 5-15%. The significant growth of Dhanmondi, one of the target districts, as a commercial district, shows the project's contribution through stabilized power supply.

## Relevance

The project has been highly relevant with Bangladesh's national policies and development needs at the times of both appraisal and ex-post evaluation. Under the current administration, issues of rural electrification and the enhancement of efficient power distribution are priority policies in the power sector, hence the project's importance remains high.

## Efficiency

Although project cost is lower than planned, project period is slightly longer than planned (104% of the plan); therefore the evaluation for efficiency is moderate. The major cause of the delay was the need to amend the design for the urban power distribution system to meet the increased demand in the target districts.

## Sustainability

Though no problem has been observed in the capacity of the present executing agency nor its operation and maintenance (O&M) system, both the Palli Bidyut Samity (electrification cooperative) and the Bangladesh Power Development Board in charge of the urban district have incurred deficits; due mainly to a hike in the power procurement price. There is concern that the financial problem may inflict an adverse effect on the O&M system in the future. Therefore, sustainability of this project is fair.

## Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated to be satisfactory. Recommendations are: to shorten the time of load shedding, review the power procurement cost (or electric power selling price), expand the number of connections by transferring control over the power facilities owned by the BPDB, and improving profitability by securing large (e.g. industrial and commercial) consumers. Also, it is recommended that similar projects be implemented in other areas, as the effectiveness of the project in urban districts is high.

\*All ex-post evaluation reports including this can be referred to in JICA's website, "Evaluations" → "Ex-post Evaluation (ODA Loan)" ([URL: http://www.jica.go.jp/english/operations/evaluation/oda\\_loan/post/](http://www.jica.go.jp/english/operations/evaluation/oda_loan/post/))