



1. Project Data:		Date Posted : 08/17/2000	
PROJ ID: P004796		Appraisal	Actual
Project Name: Distribution System And Energy Efficiency	Project Costs (US\$M)	536.5	521.7
Country: Thailand	Loan/Credit (US\$M)	109.0	104.7
Sector(s): Distribution & Transmission	Cofinancing (US\$M)		
L/C Number: L3598			
	Board Approval (FY)		92
Partners involved : ADB, GEF, AUSAID	Closing Date	06/30/1998	12/31/1999
Prepared by :	Reviewed by :	Group Manager :	Group:

2. Project Objectives and Components

a. Objectives
The project had six objectives:

1. Improve and expand the distribution system of the Metropolitan Electricity Authority (MEA) in order to meet the expected rapid increases in demand;
2. Sustain the efficiency of MEA's operations in the face of a rapid increase in the scope and complexity of its business;
3. Strengthen the utility's financial and management information systems;
4. Investigate opportunities for privatization of some of MEA activities;
5. Incorporate increased levels of safety and environmental acceptability in MEA practices; and
6. Introduce demand side management, including the promotion of electricity energy efficiency in the Thai power sector.

b. Components
The Project comprised of two major components:

A. Distribution System Improvement and Expansion, which consisted of:

1. Construction of sub-transmission and distribution facilities including (a) 230/69 kV transmission substations and transmission lines; (b) 115 kV, 69 kV and 24 kV transmission and distribution substations and associated lines; (c) conversion from overhead to underground distribution in heavily congested areas; and (d) miscellaneous equipment and materials; and
2. Conducting of three consulting studies regarding (a) formulation of strategies for privatization of some of MEA's activities; (b) design and implementation of subsystems in the integrated financial and management information system; and (c) environmental and safety consideration in system design.

B. Promotion of Electricity Energy Efficiency, supported by the Global Environmental Facility (GEF), which included the Five Year Demand Side Management Master Plan approved by the Government for implementation by EGAT, with the participation of MEA and PEA.

c. Comments on Project Cost, Financing and Dates
Excluding interest during construction (which almost tripled due to much longer-than-expected construction period), the total actual project cost (US\$521.7 million) was 2.8 percent lower than the appraisal estimate (US\$536.5 million). However, the total project financing requirements (including interest during construction), amounting to US\$557.2 million, were slightly higher (by 1.4 percent) than the appraisal estimate of US\$549.6 million.

Out of the total project financing required (US\$557.2 million), US\$104.7 million was from the Bank loan as compared to US\$109.0 million estimated at appraisal; US\$349.6 million was from the Government (MEA's own internal cash generation and other borrowings) as compared to US\$331.6 million estimated at appraisal; and US\$103.0 million was contributed by an ADB loan, US\$6.0 million less than the appraisal estimate. A stand-alone GEF grant (Thailand Promotion of Electricity Energy Efficiency, TH-GE-28637) in the amount of US\$9.5 million, together with an AUSAID Grant (Australian Grant No. 21221) of US\$5.6 million, provided to EGAT, financed the introduction of demand side management in Thailand.

The project closed 2.5 years behind the original schedule. The closing date was extended twice.

3. Achievement of Relevant Objectives:

The project had six objectives:

1. **Improve and expand the distribution system of the Metropolitan Electricity Authority (MEA):** This objective was achieved. MEA's sales from 1993 to 1997 increased at an average annual rate of 7.9 percent, and the substations commissioned under the Project assisted in meeting the demand. The number of customers increased from 1.7 million to 2.1 million during 1994-1999, reflecting an average annual growth rate of 4.3 percent, and timely network expansions assisted in meeting their electricity needs. Sales dropped by 3.9 percent in FY98 and 4.8 percent in FY99 because of the financial crisis in the region; however, sales are forecasted to recover and grow at an average annual rate of 4.8 percent from 2000-2004. Reliability of MEA's distribution system has also improved. In FY94, the actual reliability index in terms of SAIFI was 5.6 outages/customer/year, while the actual for FY99 was 3.09 outages/customer/year. Similarly, the actual reliability index in terms of SAIDI was 202.4 minutes/customer/year in FY94, while the actual for FY99 was 71.8 minutes/customer/year.
2. **Sustain the efficiency of MEA's operations :** This objective was achieved. MEA has contained system losses within 4 percent during the period of project implementation, below the target of 5 percent. In addition, since 1994, average sales per employee and the number of customers per employee, have increased by 50 percent and 54 percent, respectively. To reinforce operational efficiency and strengthen institutional capacity, organizational changes have been made by MEA as it prepares to commercialize and corporatize its operations. The number of MEA's operational departments has been decreased from 42 to 39, which is expected to help streamline its operations and enhance operational efficiency.
3. **Strengthen the utility's financial and management information systems :** This objective was achieved. Overall, the result of several TAs carried out under the Project improved the operational and financial management efficiency of many key business functions and developed a new business culture at MEA. MEA indicated that it has gained considerable knowledge and experience in the new integrated accounting and financial systems that were implemented under the project. These systems have improved MEA's operational efficiency and effectiveness to the extent that the improvements in timeliness and accuracy of information resulted in better and faster management decision making, as well as better corporate planning.
4. **Investigate opportunities for privatization of some of MEA activities :** This objective was achieved. The economic crisis in the middle of 1997 and the Government's regulatory reform overtook MEA's organizational restructuring plans under this objective. At the behest of the IMF and in response to the crisis, the Government formulated a new State Enterprise Sector Reform Master Plan. The Plan provided the framework and guidelines for reform of state-owned enterprises (including MEA) to improve their efficiency by increasing private sector participation and promoting competition. The recommendations objective included, among other things, proposals for divestment and contracting out. These recommendations caused strong consternation and resistance among MEA's employees, which have somewhat delayed the commercialization and privatization process. However, MEA is persevering with the recommendations after a period of dialogue with the employees and has already managed to contract out ancillary services covering cleaning, security, maintenance and vehicle repair. Much needs to be done and MEA is continuing to implement the remaining recommendations.
5. **Incorporate increased levels of safety and environmental acceptability in MEA practices :** This objective was achieved. Based on the recommendations of a TA Study conducted under the Project, MEA has incorporated in its operations many of the recommendations related to safety and environmental protection, including those concerned with hot-line maintenance practices and the disposal of hazardous materials.
6. **Introduce demand side management, including the promotion of electricity energy efficiency in the Thai power sector :** This objective was not evaluated. The ICR does not provide an implementation record of this objective because this component was financed by GEF and mainly implemented by the Electricity Generating Authority of Thailand (EGAT) through separate project arrangements. Therefore, its implementation experience will be reviewed and evaluated by the Bank separately (see ICR for TF-21221; TF-28637).

4. Significant Outcomes/Impacts:

- There are no notable outcomes or impacts outside the project's overall satisfactory outcome.

5. Significant Shortcomings (including non-compliance with safeguard policies):

- None.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Satisfactory	Satisfactory	
Institutional Dev.:	Modest	Modest	
Sustainability:	Likely	Likely	
Bank Performance:	Satisfactory	Satisfactory	
Borrower Perf.:	Satisfactory	Satisfactory	
Quality of ICR:		Satisfactory	

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

- In the process of privatization, adequate attention must be given to make sure that all stakeholders, including employee unions, participate in the process actively from the very beginning, fully understand the process, and are confident that their concerns will be properly addressed during the process .

8. Assessment Recommended? ☒ Yes ☐ No

Why?

A. This project would be worthwhile auditing in line with OED and OEG's Evaluation of the Bank's Performance in Private Sector Development in the Energy Sector . Specifically, there may be lessons to learn from the Government's implementation of the Master Plan for State Enterprise Sector Reform, which includes privatization of electric utilities. Where MEA is concerned, the Master Plan has the following targets :

- Establish non-core activities as business units (January, 1999--December, 2000)
- Establish as separate cost centers within MEA the functions of distribution and supply (January 1999--December 2001)
- Corporatize as wholly owned subsidiaries the non -core activities (January 2000--December 2001)
- Corporatize MEA core electric distribution business (January 2001--December 2002)
- Privatize MEA non-core subsidiaries (January 2002--December 2004)
- Privatize MEA (January 2003--December 2004)

B. Demand-side management is an important objective under the project for which little evaluation has so far been carried out in the Bank. An audit of the GEF component (TF-21221; TF-28637), in conjunction with an audit of the main project (L3598) would be a cost-efficient way to evaluate the implementation experience of both .

9. Comments on Quality of ICR:

The quality of the ICR is satisfactory . It was well written and thoroughly covered the relevant material .