



1. Project Data:		Date Posted : 08/09/2001	
PROJ ID : P004647		Appraisal	Actual
Project Name : Promotion of Electricity Energy Efficiency	Project Costs (US\$M)	189.0	59.3
Country : Thailand	Loan/Credit (US\$M)		
Sector(s) : Board: EMT - Central government administration (45%), General industry and trade sector (35%), Power (20%)	Cofinancing (US\$M)	45.9	33.38
L/C Number :			
	Board Approval (FY)		93
Partners involved : GEF, Australia (AIDAB), OECF/JBIC	Closing Date	12/31/1998	06/30/2000
Prepared by :	Reviewed by :	Group Manager :	Group:
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2. Project Objectives and Components			
a. Objectives			
The project had two objectives:			
<ul style="list-style-type: none"> to build sufficient institutional capacity in the Thai electric power sector and the energy related power sector to deliver cost effective energy services to the economy; and to pursue policies and actions that would lead to the development, manufacture and adoption of energy efficient equipment and processes within the country. 			
The overall aim was to achieve annual energy savings of 1,427 GWh, equivalent to a reduction of carbon dioxide emissions of 1.16 million tons.			
b. Components			
Creation of a Demand-Side Management Office (DSMO) within the Electricity Generating Authority of Thailand (EGAT) to implement DSM programs;			
<ul style="list-style-type: none"> Development and implementation of technological and market intervention strategies in the residential, industrial and commercial sectors; Development of financial mechanisms to assure that the market adopts the various energy efficiency programs; Promulgation of codes and standards to support efficient equipment; Establishment of testing laboratories; Development of project evaluation and monitoring systems and protocols; Development and training of energy management companies and DSM program contractors; Integration of supply-side and demand-side planning in the electricity planning process; Development of a direct utility load control program; and Undertaking of special studies, as needed. 			
c. Comments on Project Cost, Financing and Dates			
The project was to be funded largely by self-generated EGAT funds (\$148.5), with additional support from Australian aid (\$5.4 million), a concessional loan (\$25 Million) from OECF, in addition to the grant of \$15.5 million from GEF. In the event, because of the reduced expenditure only about half the OECF loan has been disbursed and EGAT expenditure was reduced to about \$31.7 million. The GEF and AIDAB grants, however, were almost entirely utilized, with only \$0.2 of the GEF grant being canceled.			
3. Achievement of Relevant Objectives:			
Overall, EGAT met the general objectives of the project. In practice, some significant changes were made in the approach during implementation but, by project completion it is estimated that the annual reduction in CO ₂ emissions (resulting from adoption of energy saving devices, equipment etc.) was 2.32 million tons at an overall cost of \$59.3 million, i.e., twice the original target for only 32 percent of the cost estimated at appraisal.			
4. Significant Outcomes/Impacts:			
EGAT and DSMO worked effectively with other Thai agencies and fostered public /private partnerships with			

manufacturers, DSM contractors, ESCOs and electricity consumers to support its program efforts . Public campaigns to increase awareness of efficiency standards, linked to product labelling proved very successful in speeding adoption of more efficient appliances et.. For example, the market share of "level 5" single-door refrigerators increased from 2.3 percent to 100 percent, reducing peak demand by 84 MW and energy use by 849 GWh/yr, and contributing to a 21% reduction in overall refrigerator energy consumption .

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

There were no significant shortcomings in project performance . The project design was based on the recommendations of a report by the International Institute for Energy Conservation (IIEC) (an international NGO), based on experience in North America . The large reduction in project cost resulted largely from an early realization that these approaches were not well suited to Thai conditions, and from an unforeseen change in the structure of energy demand. That the project responded quickly to these problems is a tribute to the flexibility of project management and Bank support.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Highly Satisfactory	Highly Satisfactory	
Institutional Dev .:	High	Substantial	A 'high' rating in the OED review requires that the "project as a whole made...a <i>critical</i> contribution to the country's/region's ability to use human, financial, and natural resources." OED rates it as substantial on the grounds that the contribution of the project has been <i>significant</i> in these regards.
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:

- DSM programs should be designed with due consideration of local cultural realities to ensure high consumer acceptance and participation, and to achieve meaningful impacts .
- Mechanisms for transfer of competency and skills should be carefully assessed to determine the appropriate use of consultants, and should also consider advisory assignments (including periodic assignments) to maximize effectiveness.

8. Assessment Recommended? ☒ Yes ☐ No

Why? If a review is to be carried out of the performance of the GEF supported program in energy efficiency and greenhouse gas mitigation, this project should almost certainly be included as a positive example of performance.

9. Comments on Quality of ICR:

The ICR is of high quality, providing a thorough review of project achievements .