



1. Project Data:		Date Posted : 07/31/2003	
PROJ ID: P008537		Appraisal	Actual
Project Name: Power Rehab	Project Costs (US\$M)	32.9	32.5
Country: Lithuania	Loan/Credit (US\$M)	26.4	26.4
Sector(s): Board: EMT - Power (98%), Central government administration (2%)	Cofinancing (US\$M)		
L/C Number: L3737			
	Board Approval (FY)		94
Partners involved :	Closing Date	06/30/1999	07/01/2002

Prepared by :	Reviewed by :	Group Manager :	Group:
Lourdes N. Pagaran	Christopher D. Gerrard	Alain A. Barbu	OEDST

2. Project Objectives and Components

a. Objectives

The project had three objectives :

- 1) Improve the operating safety, efficiency, reliability, and environmental performance of the electricity generating system, thus reducing the amount of imported fuel needed for its operation .
- 2) Improve the safety, reliability and flexibility of the electricity transmission system, thus reducing power disruptions and facilitating economic load management.
- 3) Support the restructuring and commercialization of Lithuania State Power System (LSPS) - renamed the Lithuanian Power Company (LPC) in 1995.

b. Components

The project had three components :

- 1) **Power Rehabilitation (\$ 16.78 million, appraised estimates)**. Rehabilitation of two thermal plants: unit 6 at the Elekrenai Thermal Power Station, and two units (2x80 MW) at the Mazeikiai combined heat-and-power (CHP) station.
- 2) **Upgrading of the electricity system (\$5.02 million, appraised estimates)**. Upgrading of the dispatch center in Vilnius, system communications and control equipment, and replacement equipment at high voltage transmission substations.
- 3) **Restructuring of LSPS and other technical assistance (\$1.68 million, appraised estimates)**. Consultants' services for LPC restructuring and management, regulatory framework assistance study, electricity system communications strategy study; and project engineering, and management .

Revised Components :

Rehabilitation of the Mazeikiai plant was cancelled, per loan agreement amendment in 1997. The Mazeikiai plant rehabilitation component was cancelled after it was determined that its sales of heat to the neighboring oil refinery were not likely to meet the projected level at appraisal and thus, the economic justification for such an investment was diminished. The upgrading of the Vilnius dispatch center subcomponent was dropped following a failed tendering process, and subsequently, was implemented by the LPC using its own resources .

c. Comments on Project Cost, Financing and Dates

Total project cost was \$32.5 million, compared to the appraised estimate of \$32.9 million. The Bank provided a loan of \$26.4 million, as appraised, and was fully disbursed . LPC provided financing of \$6.1 million, as appraised. The counterpart financing of \$0.4 million from the government did not materialize .

The project had three amendments (December 1997; June, 1998; September 1998) reflecting primarily the reallocation of funds between various components . In 1997, following the cancellation of Mazeikiai plant and the Vilnius dispatch center, funds were reallocated to the communication and control systems, and the transmission system. Allocation for component 1 was reduced to \$9.5 million, while allocation for component 2 increased to \$22.5 million. Financing for the technical assistance component was reduced to \$ 0.50 million. Technical studies originally

envisaged at appraisal were funded from non-Bank sources (USAID provided funding for the regulatory framework assistance study, while LPC carried out the electricity communications strategy study using its own experts).

The project's closing date was extended twice . The project closed on July 01, 2002. The three-year delay in project completion was primarily due to LPC's limited implementation capacity and frequent turn -over in higher management (see section 5).

3. Achievement of Relevant Objectives:

1) Improve the operating safety, efficiency, reliability, and environmental performance of the electricity generating system . *This objective was substantially achieved.* Unit 6 of the Elektriniai thermal station was rehabilitated including the installation of low NOx burners and modernization of the control system which allows real time monitoring and operation of the power system . With rehabilitation, emissions have been reduced by 50 percent, from 850 to 425 mg/Nm3 for heavy fuel oil; and from 700 to 330 mg/Nm3 for natural gas . Unit 6, however, has been in operation for only 292 hours in 2001 and 71 hours in 2002 because of substantial overcapacity in electricity generation resulting from the deferred closure of the Nuclear Power Plant Ignalina (NPPI) (which produces more than 80 percent of Lithuania's electricity). It is expected that by 2005 there will be greater utilization of the thermal station after the closure of the NPPI.

2) Improve the safety, reliability and flexibility of the electricity transmission system . *This objective was achieved.* The installation of a new ring of reliable and high capacity cables using 330-110 kV electricity powers allowed LPC to connect to all major system components in an integrated information medium and provide additional data transmission services . Power transformers and switchgear equipment at Kaunas station have been replaced, and new digital protection relays with self-test features were installed at key points of the substation, which reduced the fault rate and response time . With the upgrade, circuit breakers maintenance has been reduced from two weeks after every three years of operation, to one day per annum .

3) Support the restructuring and commercialization of LPC . *This objective was achieved.* The electricity business of LPC has been unbundled and five new state-owned joint stock companies have been established (with majority of the shares in all five companies still owned by the state) . All the non-core activities of LPC have been sold or liquidated, or are in the process of being privatized . Six district heating networks were transferred to the municipalities in 1997; with private expertise introduced into the management of the district heating business through concession and leasing arrangements . LPC has also introduced commercial operational norms throughout the organization, and established new functions, including treasury management . In 1997, restructuring of the State Commission for Pricing and Energy Resources and Energy Activity Control (commonly known as the Energy Prices Commission, or EPC) facilitated the progressive move towards economic pricing of all energy products . In 2000, the LPC Board composition included outside directors with relevant backgrounds in finance and law, and chaired by the Director of the Lithuanian Energy Institute .

The project was classified as Environmental Category A . Environmental studies were prepared consistent with the requirements of the Lithuania "Rules for the Elaboration of Environmental Protection" and the Bank's Operational Directive 4.01 (Environmental Assessment). The implementation of the project was expected to have positive environmental benefits from greater efficiency in the use of imported fuels and to contribute to decreased levels of air pollution in Elektriniai .

4. Significant Outcomes/Impacts:

- Ex-post ERR (including environmental benefits and associated investment costs) for the Elektriniai thermal power plant was at 26 percent compared to the appraised estimate of 16.3 percent.
- Financial performance of LPC has improved dramatically since 2000 . In May 2002, it was able to prepay \$8.0 million of the Bank's Power Rehabilitation Loan .
- All production subsidies in the sector have been eliminated .

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

- LPC's limited implementation capacity, especially at the initial project phase, and frequent turnover of higher management staff contributed to implementation delays . After initial reluctance, the LPC redesigned its operational and management structures and achieved improvements in key organizational, operational, and financial areas .
- The project's investments were predicated on an early shutdown of the NPPI and its deferred closure (in 2005 instead of the projected 1998 closure) resulted in the underutilization of the Elektriniai thermal power plant .
- In 1999, a combination of inadequate tariffs, non-performing sales to Belarus, and a high debt to revenue ratio prompted the Bank to consider suspending loan disbursements until a recovery plan was put in place, which LPC did in 2000, and led to substantial improvements in its financial position .

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments

Outcome:	Satisfactory	Satisfactory	
Institutional Dev .:	High	High	Major improvements in the management of LPC including the adoption of international accounting standards; establishment of treasury management capable of operating effectively in capital markets; creation of separate revenue, cost and profit centers; and implementation of a corporate governance structure, which includes outside directors with appropriate knowledge and experience, designed to minimize political interference.
Sustainability:	Highly Likely	Highly Likely	On the assumption that NPPI will be closed in 2005, as scheduled; and the Lithuanian electricity power market and eventually, the Baltic common electricity market will move forward. Further, the country's formal accession in 2004 will align its energy policies to the EU .
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:

The ICR provides important lessons which are summarized below :

- 1) With strong government support, enabling regulation and governance, and budget discipline, a publicly owned utility can be well-run, financially sound, and can be a positive player in the market reform .
- 2) Bank project operations and structural adjustment operations, if coordinated closely, can reinforce each other in achieving project covenants and conditionalities .
- 3) Excessive focus on privatization, particularly in the early stages of the reform process, can be counterproductive especially when many stakeholders are involved; whereas the benefits of restructuring, unbundling and corporatization can be readily demonstrated and are likely to gain more acceptance from key players .
- 4) Good utility governance is underpinned by clear definition of its four pillars : policy, ownership, management and regulation.
- 5) An independent, well-resourced regulator put in place at an early stage of the reform process can be a solid bulwark against backsliding and political interference .

8. Assessment Recommended? Yes No

Why? Restructuring and commercialization of public sector utilities in small countries would be a topic of interest and relevance to other small countries in the region, and elsewhere . The audit could be clustered with other power projects in the Baltic states .

9. Comments on Quality of ICR:

The quality of the ICR is rated as Satisfactory . The ICR is well written, comprehensive, candid, and internally consistent.