



<b>1. Project Data:</b>		<b>Date Posted :</b> 05/28/2003	
PROJ ID: P007173		<b>Appraisal</b>	<b>Actual</b>
<b>Project Name:</b> Energy Sector Modernization	<b>Project Costs (US\$M)</b>	101.2	58.45
<b>Country:</b> El Salvador	<b>Loan/Credit (US\$M)</b>		
<b>Sector(s):</b> Board: EMT - Power (80%), Telecommunications (10%), Central government administration (10%)	<b>Cofinancing (US\$M)</b>	20.0	10.87
<b>L/C Number:</b> L3920			
	<b>Board Approval (FY)</b>		95
<b>Partners involved :</b> EXIMBANK of Japan	<b>Closing Date</b>	06/30/2000	06/30/2002
<b>Prepared by :</b>	<b>Reviewed by :</b>	<b>Group Manager :</b>	<b>Group:</b>
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**2. Project Objectives and Components**

**a. Objectives**

The project had two objectives:

- 1) Improve service reliability and increase coverage by rehabilitating, modernizing and expanding power generation, transmission, sub-transmission and distribution systems; and
- 2) Assist in the restructuring of the sector's legal and regulatory framework through the preparation of legislation and procedures, and to support the Electricity and Hydrocarbons Regulatory Commission (EHRC) and National Energy Council (NEC) once they are established.

The project is part of a five year (1995-1999) time slice of the government's Power Investment Program (PIP) with a total cost of \$896 million.

**b. Components**

The project had three key components:

- 1) **Rehabilitation, Modernization and Expansion of Hydroelectric Power Plants (\$42.37 million or 78% of total project cost):** (i) 5 de Noviembre (81.4 MW); (ii) Cerron Grande (135 MW); (iii) Guajoyo (15 MW); (iv) Installation of a third unit at Cerron Grande (67.5 MW); and (v) sedimentation control equipment.
- 2) **Policy Studies and Technical Assistance (\$6.91 million or 13% of total project cost):** (i) Energy Sector Restructuring, including preparation of secondary legislation and and/or regulations/decrees for the power sector in support of the Electricity Law, and assistance in the establishment of EHRC and NEC and in developing their operational capabilities; (ii) Power Sector Restructuring, including defining the role of CEL (Rio Lempa Electric Utility Company), the state-owned public utility, under the framework of the new Electricity Law; and assistance in promoting private sector participation in generation; and (iii) Engineering Studies and Training, including feasibility studies for hydroelectric projects, detailed design and specification for the expansion of Cerron Grande and Guajoyo hydroelectric plants, studies on environmental impacts of hydroelectric power plants funded under the project; studies on the improvement of CEL's information and telecommunication systems; and training of CEL's staff in technical, financial, and managerial techniques.
- 3) **Modernization of CEL's Telecommunication and Information Systems (\$5.27 million or 10% of total project cost)** . Repair, upgrading, and installation of software and hardware systems to provide CEL with a system adequate for the operation of the national system.

**Revised Components :**

Two of the subcomponents, the expansion of Cerron Grande and feasibility studies for hydroelectric projects, were cancelled in November 1998 and August 2000, respectively, at the request of the government. Cerron Grande was cancelled on the basis of an economic study which concludes that additional capacity would not be competitive in the new and open market. Studies for the two other hydroelectric studies were cancelled in 2000 in part because of the heavy opposition from NGOs on social and environmental grounds and government's view that the private sector should take responsibility for investment. The cancelled subcomponents, albeit important, did not result in the

restructuring of the project. The loan agreement was amended in March 1999.

### c. Comments on Project Cost, Financing and Dates

Total project cost was \$58.45 million (including interest during construction) compared to the appraised estimate of \$101.2 million. The Bank provided a loan in the amount of \$36.97 million compared to the appraisal estimate of \$ 65 million. Co-financing was provided by the Japanese EXIMBANK in the amount of \$ 10.9 million compared to the appraisal estimate of \$ 20 million. The government provided counterpart financing of \$ 10.6 million compared to the appraisal estimate of \$ 16.2 million. As a result of the cancellation of two subcomponents, loans from the Bank and the EXIMBANK of Japan in the amount of \$23 million and \$7.6 million, respectively, were cancelled.

- Actual project cost is lower than the appraised estimates for two reasons : (i) cancellation of two of the original subcomponents (section 2b), and (ii) low utilization of the TA budget. The government preferred to use funds from other sources because of the Bank's stringent requirements for hiring consultants .
- After one extension, the project closed on June 30, 2002

### 3. Achievement of Relevant Objectives:

1) **Improve service reliability and increase coverage by rehabilitating, modernizing and expanding power generation, transmission, sub -transmission and distribution systems** . *This objective was fully achieved.* Rehabilitation of Guajoyo, 5 de Noviembre and Cerron Grande hydroelectric power plants increased annual generation capacity by 193 GWh or 18 percent of annual generation in an average rainfall year . Electricity coverage increased to 74 percent in 2001, higher than the planned target of 68 percent (SAR), and from a baseline of 61 percent in 1993. The quality of technical service also improved .

2) **Assist in the restructuring of the sector's legal and regulatory framework through the preparation of legislation and procedures, and to support the Electricity and Hydrocarbons Regulatory Commission (EHRC) and National Energy Council (NEC) when their respective laws are enacted** . *This objective was achieved with only minor shortcomings.* The new Electricity Law was enacted in 1996 after protracted discussions and negotiations between the government, the legislative assembly, the Bank, and other lending institutions . The Electricity Law calls for, among others, the unbundling of generation, transmission, distribution and commercialization of energy; competition in the generation and commercialization activities; and unrestricted and open access to the transmission system . Although the EHRC and CNE were not established as proposed in the SAR, various entities were established : (i) Superintendence for Electricity and Telecommunications (SIGET), replacing EHRC, an independent regulatory agency to monitor the development of the power market, regulate charges for transmission and to resolve disputes among operators; (ii) Electricity Energy Directorate (DEE), replacing CNE, to ensure efficient operation and high quality service of the power sector; (iii) Transactions Unit (UT), an autonomous body to administer the Power Wholesale Market; and (iv) the Investment Fund for Electricity and Telecommunications (FINET) to administer funds for subsidizing low-income consumers.

**Environmental Regulation was put in place** . An Environmental Assessment financed under the project enabled the Ministry for the Environment and Natural Resources to establish norms and regulations for the operation of power plants, transmission systems and distribution companies . Subsequently, all activities of the electric power sector, including existing installations, require an environmental permit

### 4. Significant Outcomes/Impacts:

- **The electric sector was restructured** . With the enactment of the new Electricity Law, CEL, which previously had a monopolistic control of the sector, was transformed and downsized from 3000 to 400 employees. Although CEL remained a publicly owned utility with ownership of four hydroelectric power plants, it sold all its thermoelectric power plants and all its distribution companies to private investors . Various entities were established in support of the restructuring of the power sector including the independent regulator, SIGET, which has been in operation for six years and has been accepted by the power industry, the public and political structure of the country .
- The estimated overall Economic Rate of Return (ERR) was higher than anticipated at appraisal ---27 percent compared with 24 percent.

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

- Delays in the early stages of project implementation were due to protracted congressional approval of the loan; difficulties with Bank procurement regulations; belated enactment of the Electricity Law; and frequent changes in staff and organization up until 1997.
- A project coordinating unit was not set up until 1997 after which the project progressed smoothly .

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

1. Sustained government commitment and ownership to reforms is critical, especially in countries where there are frequent changes in political leadership.
2. Dialoguing with and getting on board those affected by the reform, including workers' unions and distribution companies, is another critical element to successful implementation of sector reforms .
3. Designing project objectives to conform to government's broader public sector reform program and to the Bank's CAS and lending programs improve the chances of successful implementation .
4. Project coordination units and procurement training on the Bank's requirements improve project implementation .

**8. Assessment Recommended?**  Yes  No

**9. Comments on Quality of ICR:**

The quality of ICR is satisfactory. It is internally consistent and provides adequate information to support its ratings .