



1. Project Data:		Date Posted : 07/23/2001	
PROJ ID: P006036		Appraisal	Actual
Project Name: Yacyreta II	Project Costs (US\$M)	1393	3029
Country: Argentina	Loan/Credit (US\$M)	298.50	427.20
Sector(s): Board: EMT - Power (100%)	Cofinancing (US\$M)	595.70	1562.50
L/C Number: L3520			
	Board Approval (FY)		92
Partners involved : IDB	Closing Date	12/31/1998	12/31/2000

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2. Project Objectives and Components

a. Objectives

The project was designed to:

- (i) help provide an efficient supply of energy in the mid 1990s by ensuring operation of Yacyreta's first units with an adequate transmission system;
- (ii) bring about improved environmental management and appropriate handling of social aspects of Yacyreta; and
- (iii) encourage private capital participation in Entidad Bionacional Yacyreta (EBY).

b. Components

The project comprised five components:

- (i) completion of Yacyreta's basic permanent structures;
- (ii) installation of Yacyreta's first six generating units;
- (iii) implementation of the 500 kV Yacyreta-Resistencia transmission link;
- (iv) implementation of Yacyreta's Resettlement and Environmental Management Programs (REMP) required for reservoir operation at 78m; and
- (v) assessment of possible private capital participation in EBY.

The loan was to finance civil works and related engineering of components (i) and (ii), and the technical assistance for components (iii), (iv) and (v).

c. Comments on Project Cost, Financing and Dates

Project Cost: Total costs for the current project totaled US\$ 3029 million as against the appraisal estimate of US\$1393 million. This project forms part of the entire Yacyreta scheme that began in 1978 and cost US\$6,437 million. After expressing all figures in constant year 2000 US\$, the costs overrun for the current project is estimated at 45 percent. The ERR for the current project is 15.8 percent (compared to 13.3 percent at appraisal), if the power output is remunerated at the price agreed under the Yacyreta treaty. If output is valued at wholesale price, the ERR drops to 9.5 percent. For the entire Yacyreta scheme beginning from 1978, the ERRs are very low at 3.4 percent and 1.4 percent respectively.

Financing: Bank loan was US\$462.2 million (against US\$297.5 at appraisal); US\$1084.3 million from Government of Argentina (GOA) -- against US\$468.70 at appraisal -- and US\$1562.5 million from cofinanciers (against US\$595.7 million at appraisal). The overruns therefore ranged between 155 percent and 262.3 percent in nominal terms.

Dates: The project closed two years behind the original closing date of 12/31/98. This was due to a variety of reasons including partly unforeseen resettlement and environment considerations, delay in release of counterpart funds due to the "Tequila effect", decreased commitment on the part of Paraguay, as well as institutional and coordination issues.

3. Achievement of Relevant Objectives:

- (i) **Completion of Yacyreta's basic permanent structures** : *This objective was partly achieved.* The first unit was commissioned and became operational on schedule. The remaining nineteen units began operating a few weeks ahead of schedule. However, due to the level of the reservoir remaining at the first stage of 76m, the turbine generating units were delivering only two-thirds of their rated capacity. The consequent loss of earnings is estimated between US\$563 million to US\$1629 million.

(ii) **Bring about improved environmental management and appropriate handling of social aspects of Yacyreta** : *The objective was partly achieved, though with significant delay, and doubts over quality*. In late 1994, the Bank and GOA decided that environmental protection and population resettlement measures were at an acceptable stage to go ahead and fill the reservoir to 76m. Pending actions were included in a Plan A, but additional issues cropped up that necessitated a Plan B for long-term operation at 76m. A study by the Bank's Inspection Panel (1997) -- prompted by a complaint from an NGO (1996) from the Paraguay side of the project -- was highly critical of the Bank's performance. In response, the Bank, Borrower and EBY completed Plan A and B, though after delays, and also increased Bank's financing for resettlement and environmental mitigation. In 1999, the Internal Audit Department voiced concerns similar to the Inspection Panel -- prevalence of engineering considerations over environment and resettlement issues in the early years of the project; Bank allowing continuous deferment in meeting obligations; and deficient supervision practices.

(iii) **Encourage private capital participation in Entidad Bionacional Yacyreta (EBY)**: *This objective was partly achieved*. An international consulting firm recommended that international competitive bidding be invited for marketing Yacyreta's production, and managing, maintaining, and operating the hydroelectric plant. The final outcome was limited to the privatization of the 500kV lines linking Yacyreta with the national interconnected system.

On the whole, the project did not meet its objectives. There appears to be no clear roadmap for carrying the project forward to the stage where all units can operate at full capacity. Though the project did not have any explicit institutional objective, it made modest contributions towards improving EBY's structure and management effectiveness, transparency, internal controls etc. However, EBY faces big challenges in dealing with the issues that would arise out of raising the level of the reservoir from 78m to 83 m.

4. Significant Outcomes/Impacts:

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

The following shortcomings contributed to the unsatisfactory outcome of the project :

- (a) GOA failed to give adequate priority to the project during the financial crisis of 1995.
- (b) Frequent changes of Yacyreta's Executive Director adversely affected EBY's performance.
- (c) Poor oversight of the areas to be flooded resulted in invasion of families seeking resettlement compensation.
- (d) EBY was slow in performing land acquisitions and housing construction, adding to pressures that slowed down project implementation.
- (e) The Bank failed to reconcile GOA's political interest in expediting the main civil works with the existing technical concerns about the project's resettlement and environmental impacts.
- (f) The Bank's appraisal failed to take note of the lessons of the Yacyreta I project, where lack of counterpart funds was an important factor for poor performance.
- (g) The Borrower was ineffective in obtaining political support to bring private capital to EBY.
- (h) Delay in passing an expropriation law in Paraguay delayed land acquisition and resettlement.
- (i) The resettlement and environmental management program were only partly implemented, with major issues remaining unaddressed.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome :	Unsatisfactory	Unsatisfactory	
Institutional Dev .:	Modest	Modest	
Sustainability :	Unlikely	Unlikely	
Bank Performance :	Unsatisfactory	Unsatisfactory	
Borrower Perf .:	Unsatisfactory	Unsatisfactory	
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:

DESIGN

- (a) High cost, critical project components should be better covered by Bank loan allocations. This can cover for shortage/delay of Borrowers' funds.
- (b) Major environmental and resettlement issues should be designed as major activities of a project to maximize chances of success. This is especially important for projects that are large and complex, and involve many political and coordination issues.
- (c) Political commitment should be measured through concrete government actions.
- (d) In bi-national projects, both parties should have balanced responsibilities. Financial pressure on the most burdened party and potential lack of interest in the other party due to perverse incentives may delay a project unduly.

IMPLEMENTATION

- (e) Continuous and direct involvement of senior Bank management in large projects can help preempt crisis situations.

(f) The timetable for relocation of people should be in harmony with other project tasks .

8. Assessment Recommended? Yes No

9. Comments on Quality of ICR:

The ICR brings out all major issues in detail, as can be expected for a project that has already been subjected to studies by the Inspection Panel and Internal Audit . It is quite objective in assessing performance . The document could have been passed through an editor to avoid needless grammatical and drafting errors .