

Power rehabilitation project

Report No. ; Type: Report/Evaluation Memorandum ; Country: Bolivia; Region: Latin America And Caribbean; Sector: Distribution & Transmission; Major Sector: Electric Power & Other Energy; ProjectID: P006163

Bolivia: Power Sector Rehabilitation Project (Credit 1818-BO)

The Implementation Completion Report (ICR) on the Power Sector Rehabilitation project (Credit 1818-BO approved in FY87), prepared by the Latin America and the Caribbean Regional Office, was reviewed by the Operations Evaluation Department (OED). The Borrower contributed with a detailed self-evaluation report, a summary of which is included as part of Appendix II. The credit, in the amount of SDR5.3 million, was closed on December 31, 1994, as originally planned, at which time SDR0.2 million was canceled.

The project objectives were to rehabilitate the generating units of the state-owned power company Empresa Nacional de Electricidad (ENDE), strengthen its transmission system, improve its operational efficiency, and develop a power expansion plan. This program was needed because the power supply system worsened over the period 1981-1986 as a result of deteriorating national economic conditions. The project comprised: (a) the rehabilitation of ENDE's generating units; (b) the improvement of ENDE's transmission system by adding and/or relocating power transformers; and (c) the improvement of ENDE's operational efficiency by strengthening its management and financial information systems, and by developing a least-cost power expansion plan for the sector.

The project met its physical objectives. The works were completed as planned, in some instances ahead of schedule, and ENDE's efficiency was enhanced. The credit helped ENDE carry out the 1987-1989 overhaul and subsequent maintenance of generating units. Two new 25 MVA transformer substations expanded the power system distribution capacity, and the reliability and carrier capacity of the high voltage interconnected system was also increased. Higher than estimated local costs caused a project cost overrun of 23 percent, but the recalculated project economic rate of return (12.3 percent) is satisfactory although lower than the appraisal estimate (13.5 percent).

Institutional objectives, explicitly covenanted, were mostly achieved. A modern management information system was implemented to help ENDE carry out its administrative and financial functions effectively. A master power expansion plan identified the least-cost generation expansion for the period 1990-2001 (it was based on an energy strategy study done by the ESMAP program). ENDE's fixed assets were revalued and a methodology developed to update their value. Although the rate of return (ROR) on ENDE's assets climbed steadily from 1.6 percent in 1988 to 5 percent in 1994, it was always below the covenanted values and did not meet the target of 7 percent for 1994. The Bank waived this non-compliance because of the positive trend, the good self financing ratio (average 46 percent in the period 1990-1994), the good debt service coverage (average 2.5 in the period 1990-1994), and the greatly improved record of billing and collection.

In view of the above, OED rates the project outcome as satisfactory and its institutional development impact as substantial. OED rates project sustainability as likely because the privatization of the power sector is expected to further improve the performance of the power entities which were strengthened by the credit. These ratings are consistent with those indicated in the ICR.

Bank performance is rated as satisfactory: there was a good dialogue with the Government and with ENDE during project execution. Moreover, Bank support-under a follow up project for private sector participation and limitation of governmental involvement by establishing an appropriate policy and regulatory framework (including full cost recovery pricing), was a key factor in the successful reform and subsequent privatization of the Bolivian power sector.

The quality of the ICR is satisfactory. It presents a concise, yet complete, account of project implementation and results, describes a plan for future project operation and evaluation, and includes an appropriate set of key indicators agreed with the Borrower to monitor future project performance. It draws, among others, two important lessons: (i) early identification and timely resolution of environmental issues related to transmission lines and substations is critical to avoid subsequent construction delays and/or operational problems; and (ii) improvements in the management information systems of power utilities like ENDE, besides contributing to more effective operational management, also provides the reliable database required for their eventual privatization.

The project may be audited together with other power projects in Bolivia.