

Reforming Bolivia's Power Sector

WHEN THE WORLD BANK APPROVED FUNDING FOR Bolivia's Power Rehabilitation Project in 1987, the expected outcome was confined to improvements in the operation of the state-owned power company, ENDE (*Empresa Nacional de Electricidad S.A.*). But a recent OED evaluation has found that the operational relationship developed by the project also assured Bank participation in a radical reform of Bolivia's power sector—a privatization scheme that resulted in a more efficient sector.

The project objectives of rehabilitating the agency's facilities, improving its financial and administrative efficiency, and developing a master plan for expanding power through 2010 had been largely achieved by 1992. In the two remaining years of project implementation, the election of a reform-minded government provided the Bank with an opportunity for a broader sectoral dialogue with the government, which eventually contributed to sweeping reform.

Pushing for Reform

The Bank had first urged Bolivia to privatize its power sector in 1989, but with limited success. The government at the time resisted the reform because the sector, in its view, was already running efficiently. It was indeed more efficient than the power sectors of its neighboring countries. Bolivia never experienced the power shortages and blackouts that prompted privatization elsewhere in Latin America

(most notably in Argentina and Peru). The government that came into power in 1993 dropped its resistance to change, however, clearing the way for the reform that followed. The seeds of that reform had been planted at a 1991 meeting in Cocoyoc, Mexico, of Latin American ministers in charge of electric power. The conference, jointly organized by the Bank and OLADE (the Latin American Energy Organization), discussed principles for power sector reform. Timely, strong technical support by the Bank continued for the next few years and culminated in a May 1993 seminar in Bolivia on power sector reform, which was attended by high government officials and the executives of all the Bolivian power companies. Throughout this period, the supervision missions for the Power Rehabilitation Project used their leverage to broaden the project's objectives in support of the government's reform efforts.



Before the Reform

Until 1994, policies for the power sector in Bolivia were established in the *Código de Electricidad* (Electricity Code), issued by Supreme Decree in 1968 and subsequently amended. Energy policies were the responsibility of the Ministry of Energy and Hydrocarbons. Sector regulation was also the ministry's responsibility through the *Dirección Nacional de Electricidad* (DINE). Several generating companies served the country. ENDE was in charge of generation and transmission. COBEE, a private, U.S.-owned company, had responsibility for generation and distribution in the area of La Paz and Oruro. Two privately owned rural electric cooperatives controlled distribution in Santa Cruz and Sucre. Two subsidiaries of ENDE were in charge of distribution in Cochabamba and Potosí.

Several issues hindered development of the sector. The institutional setup and regulatory regime did not provide the incentives that generation and distribution companies needed to improve efficiency, to charge efficient prices reflective of marginal costs, or to foster competitive behavior and private sector participation. The granting and renewal of licenses was not transparent. There was an inherent conflict in ENDE's role as de facto regulator (owing to weak capacity in the DINE), system planner, and dominant producer. Tariff approval at the municipal level had politicized the process, leading to tariff distortions between consumers and regions. Although ENDE had been generally effective in operating a generation and transmission system with reasonable reliability, the efficiency of the system had shown some signs of weakening in the early 1990s (with losses as high as 16.6 percent in 1990, compared with 11.6 percent in 1986).

Keys to Success

The key to a successful reform of the sector lay in the legal and regulatory framework that was put in place in 1994. The Capitalization Law (March 21, 1994) authorized private capital investments in state-owned enterprises. The law creating the Sectoral Regulatory System (October 28, 1994) established individual superintendencies for the power, telecommunications, hydrocarbon, transport, and water sectors. The Electricity Law (December 21, 1994) detailed the operation of the power sector. Other sectoral regulatory systems were also created to regulate the financial sectors and sectors covering forestry, agricultural lands, and renewable resources.

The new sectoral structure unbundled ENDE's assets into three generation companies that were sold to private investors: Corani, Valle Hermoso, and Guaracachi. COBEE's assets were also unbundled into separate generation and distribution companies and sold to private bidders.

ENDE also created a transmission company that it then privatized. The distribution subsidiaries of ENDE and COBEE were also fully privatized. ENDE is expected to be liquidated within about two years as its remaining installations—serving Sucre, Potosí, Tarija, Cobija, and other rural electrification systems—are gradually privatized.

The privatization of the state-owned power companies used a scheme of capitalization that was unique to Bolivia. Under the scheme, private investors bought 50 percent of the shares in the newly created public enterprises. Workers and employees bought about 2 percent of the shares. The remaining shares were used to establish two funds that paid pensions to citizens over 65 years of age. This mechanism also included a contract that permitted private investors to gain management control of the company and allowed the capital generated by the sale, most of it from foreign sources, to remain with the privatized companies, obligated for investment in new business projects.

The restructuring of the sector also created a new, and stronger, institutional environment. The Superintendency of Electricity, an autonomous agency with an independent budget, is in charge of supervising compliance with sector regulation and of approving tariffs. The General Superintendent supervises the efficiency of all regulated sectors, including the power sector, and hears appeals on cases not satisfactorily resolved by the Superintendent of Electricity. A National Committee for Load Dispatch (*Comité Nacional de Despacho de Carga*), with a total of five representatives of the generating, transmission, and distribution companies; of the unregulated consumers; and of the Superintendency of Electricity, is in charge of medium-term planning (four years) and of weekly and daily dispatch of generation. Dispatch is based on marginal cost principles. The national committee is also in charge of proposing the nodal prices for generation to the Superintendent of Electricity every six months.

The new institutional structure has effectively decentralized control of the sector, and the new regulatory regime has established an independent, privatized power industry. Although the new system has been in place only a short time, observers both inside and outside Bolivia believe the power sector reform has been a success.

Winners and Losers

The power sector reform had five *winners*:

- The Bolivian economy gained new foreign capital. Private investors paid approximately US\$1,600 million to gain control of all capitalized public companies.
- The Bolivian treasury saw fiscal revenues from the power sector (sales and profit taxes) increase by 247 percent in three years (from US\$17 million in 1994 to

approximately US\$42 million in 1997). In addition, the service of ENDE's debt of approximately US\$61 million, guaranteed by the government, was transferred to the private companies.

- Private investors obtained annual rates of return of up to 14 percent and saw the price of their shares increase significantly. For example, the small amount of Corani shares traded in the Bolivian stock market increased from \$100 per share in 1994 (just after privatization) to \$215 per share in 1998. The price of COBEE's shares increased from US\$25 in 1994 to US\$43 in 1996.
- The elderly of Bolivia now receive a small annual pension from funds created by the privatization. In 1997, each elderly citizen received US\$248.
- Electricity customers have not seen rate increases (except for inflation and fuel price adjustments) and now have direct access to the power companies through newly created consumer offices to resolve grievances. Quality of service is expected to improve considerably when the new quality of service regulation is fully implemented in the next three years.

The main *losers* so far are the rural areas. The situation in these areas was not measurably improved by the reform, and rural residents continue to depend on the central and local governments for electric service. Private companies currently appear reluctant to extend service to areas that are not economically attractive, unless government is willing to provide some sort of subsidy.

Lessons

This project clearly shows that to attract private capital, the size of the sector or the relative development of the country is less important than having in place a clear regulatory system, strong and autonomous institutions to enforce it, and the will of the government to respect its commitments. In addition, it demonstrates that power sector reform should include approaches specifically tailored to serve people in suburban and rural areas who do not have electricity. Leaving this duty to the central and local governments may be inadequate if corresponding, sustainable funding arrangements are not put in place.