

Major investments in the expansion and restructuring of power transmission facilities will be required over the next few years, as new generating stations begin to feed into a system that is already overloaded and subject to heavy losses. Moreover, since the economics of energy transportation favour moving it in the form of electricity rather than coal, there will be increasing emphasis on long-distance power transmission from generating stations near the coalfields of Eastern India to markets throughout the country.

Much of this work will be undertaken by Powergrid Corp (which, together with the SEBs, accounts for 80 per cent of procurement). Powergrid had 23,000 circuit kilometres (CKm) of lines in 1993, and anticipates installing another 18,000 CKm during the 8th Plan period. Powergrid's current transmission standard is 800 KV AC, but it will be looking increasingly to HVDC and FACT (flexible AC transmission) links to reduce losses in bulk power transmission, as it completes its mandate to build a national grid out of the five regional systems. Power

Box 3.6: The World Bank Group's role in Indian power

The *World Bank* has made a total of 36 IBRD loans (US\$ 6.8 billion) and 19 IDA "soft" credits (US\$ 2.4 billion) to India for public power sector development over the years, mainly to NTPC and a few selected SEBs. The Bank has worked very closely with India on power sector reform issues, at both the central and state (SEB) levels. Because progress in reforming SEB tariff structures and other problems has been slow, the Bank has suspended loans to some of them, and in fact has approved no new power sector loans since 1993.

In its pipeline for India, the World Bank currently has under study three "Power Sector Restructuring" programs to support reform in the states of Haryana, Orissa and Uttar Pradesh, for a total of almost US\$ 1 billion. The projects are aimed primarily at rehabilitation and upgrading of generation and T&D facilities, load management and conservation, demand-side management, and assistance with privatization efforts. They will lead to substantial procurement of both consulting services and equipment.

The Bank has also provided technical assistance to a number of SEBs (via the central PFC) to hire consulting advice in preparing projects for tendering as IPPs, and for assessing and negotiating proposals received.

The *International Finance Corporation (IFC)*, the World Bank's corporate financing arm, has invested US\$ 203 million in four of the five long-standing private utilities. It is also investing in private power projects in Orissa, AP and TN. IFC now has an office in New Delhi, where it is actively seeking new power project opportunities. Many IFC projects involve a partnership of two or more firms, and IFC may even act as "matchmaker" between compatible Indian and foreign firms. IFC supplements its own investment by taking the lead in arranging funding from other sources, including ECAs and loan syndications.

The *Global Environment Facility (GEF)*, administered by the Bank, supports environment-related research and demonstration projects.

Finally, the World Bank's *MIGA (Multilateral Investment Guarantee Agency)* is available to provide political security for projects in India.

Canadian procurement under World Bank prior review contracts since 1991 is shown in Table 6.1.