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APPRAISAL STAGE

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Operation Name	First Programmatic Electricity Distribution Reform Development Policy Loan For Rajasthan
Region	SOUTH ASIA
Country	India
Sector	Transmission and Distribution of Electricity (100%)
Operation ID	P157224
Lending Instrument	Development Policy Lending
Borrower(s)	Department of Economic Affairs, Ministry of Finance, Government of India
Implementing Agency	Energy Department, Government of Rajasthan (India)
Date PID Prepared	February 17, 2016
Estimated Date of Appraisal	February 18, 2016
Estimated Date of Board Approval	March 24, 2016
Corporate Review Decision	The team was authorized to proceed with Appraisal

I. Country and Sector Background

Lifted by lower oil prices and prospects for implementation of critical structural reforms, India has become the world's fastest growing large economy. Growth in real GDP (market prices) increased from 5.1 percent in FY13 to 7.3 percent in FY15 before moderating slightly to 7.2 percent in the first half of FY16. [1] While the momentum was initially supported by private consumption (average growth of 6 percent during FY13-FY15), it has more recently benefited from a pick-up in investments (4.6 percent in FY15 and 5.8 percent in H1[2] FY16 vs. an average of 1.3 percent in the preceding two years). Non-farm activities continue to be the major drivers of growth. While trade and transport services still make the largest contribution to growth, manufacturing, construction and real-estate services have gained prominence and their combined contribution to growth increased to nearly 55 percent in FY15 from 45 percent in the previous two years.

Growth is expected to accelerate further, albeit modestly, driven by a pick-up in investments. In the near-term, India is relatively well-positioned to weather the recent global volatility. In the medium-term, however, the Indian economy is not immune to a slowdown in global demand and heightened volatility. India requires some measure of foreign capital inflows to finance both fiscal and current account deficits and ultimately

[1] FY15 refers to the fiscal year ending March 31, 2015, and so on.
[2] H1 refers to first half of FY i.e. the period from April to September

the investments needed to spur growth. .The high growth in the economy needs to be supported with corresponding growth in the power sector in the absence of which the growth can be constrained. The demand for power is expected to rise to support the growing manufacturing sector and meet the rising aspirations of the population. With about 284 GW of installed capacity (as of December 2015), the Indian power system is among the largest in the world, but per capita consumption of electricity is less than one-fourth of the world average. An estimated 300 million people are still not connected to the national electrical grid, and of those that are connected, many face frequent disruptions. Power shortages in FY2015 were equivalent to about 3.6 percent of total energy and 4.7 percent of peak capacity requirements.

During the previous decade, Rajasthan's economy grew at 7.9 percent and poverty declined more rapidly than the national average. Rajasthan is the sixth most populous state and the seventh largest state economy in the country. Despite large desert expanses, its economy grew faster than the all-India average and registered an annualized growth rate of 7.9 percent during 2004/05-2014/15, above the national growth of 7.6 percent.[3] Economic growth was much more effective at reducing poverty in Rajasthan than at the all-India level during 2005-2012 – one percent increase in growth was accompanied by 1.75 percent decline in the poverty rate, compared to the all-India responsiveness where similar growth resulted in 1.06 percent in decline in poverty.[4] The state's poverty rate declined by 19.7 percent (from 34.4 percent) to 14.7 during 2005-2012, while the all India poverty rate declined by 15.3 percent to 21.9 percent – resulting in a lower concentration of the poor in Rajasthan. The state Government aims to make Rajasthan a powerful, developed and prosperous State by 2020 (Vision 2020), with a targeted economic growth rate of 12 percent. The realization of this vision would be an important contribution to eliminating extreme poverty in India.

Electric power sector in Rajasthan has expanded and improved over time, but is now facing serious financial challenges that threaten the sustainability of supply going forward. The electricity sector in Rajasthan is separated in the generation, transmission, and distribution sub-sectors, while an independent regulatory authority (Rajasthan Electricity Regulatory Commission or RERC) is responsible for approving tariffs and oversight of regulatory obligations of electricity companies. The distribution companies of Rajasthan, namely, Jaipur Vidyut Vitran Nigam Ltd, Jodhpur Vidyut Vitran Nigam Ltd and Ajmer Vidyut Vitran Nigam Ltd, collectively referred to as Rajasthan DISCOMs, were created as part of unbundling of Rajasthan State Electricity Board (RSEB) on July 19, 2000. These entities are licensees for distribution of electricity in specific areas in the State of Rajasthan and provide electricity to about 9.5 million customers. Rajasthan has a household electricity access rate of about 67 percent in 2011 (and with a target to provide 100 percent access by 2019) and better energy availability compared to most other States. However, a combination of high generation costs, inefficiencies in the distribution sector and an accumulation of long-delayed tariff adjustments (rates remained unchanged from 2005 to 2011), resulted in several years of continuing losses requiring substantial financial support from the State. Distribution

[3] For comparison, all-India GDP growths have been calculated using the 2004-05 series.
[4] Poverty measured using the Tendulkar poverty line.

utilities have been increasing their borrowings to cover financial deficits over the years, while at the same time maintaining relatively good power supply. As a result, Rajasthan's distribution utilities have now reached unsustainable debt levels and exceedingly costly debt servicing obligations.

The Rajasthan DISCOMs are in a poor financial health and have a weak operational performance with high Aggregate Technical and Commercial (AT&C losses). The annual revenue deficit of the DISCOMs in the State has increased to INR 125 billion in FY15 (INR 67.7 billion in FY09) and the accumulated revenue deficit increased to INR 814 billion in FY15 (INR 156 billion at the end of FY09). These losses have been largely funded by short term liabilities, thus leading to total outstanding debt of INR 780 billion as on July 2015. The DISCOMs are in serious financial distress and need support to come out of this financially unsustainable position. Financial institutions are therefore now reluctant to extend further financing to the utilities, because continuing the financing of loss making utilities would increase the risk of non-performing loans that could spread beyond distribution utilities to generation and transmission companies.

The financial distress facing the DISCOMs in Rajasthan is not unique, though the State's DISCOMs have the highest amount of debt. Across India, the weakest link in the electricity value chain is distribution, with DISCOMs having accumulated losses of approximately INR 3,800 billion and outstanding debt of approximately INR 4,300 billion (as on March 2015), with interest rates up to 14-15 percent. Financially stressed DISCOMs are not able to supply adequate power at affordable rates, which hampers quality of life and overall economic growth and development. Efforts towards 100 percent village electrification, 24x7 power supply and clean energy cannot be achieved without well performing DISCOMs. Power outages also adversely affect national priorities like "Make in India" and "Digital India". In addition, possible default on bank loans by DISCOMs has the potential to seriously impact the banking sector and the economy at large. Due to legacy issues, DISCOMs are trapped in a vicious cycle with operational losses being funded by debt. This situation called for immediate steps by Government of Rajasthan (GoR) as well as by Government of India (GoI) towards financial restructuring accompanied by structural and operational reforms to financially turnaround the sector, secure the availability of power in the State and limit risks to the financial sector.

With a view to finding a sustainable solution to the DISCOM financial troubles, the Government of India (GoI) announced the Ujwal DISCOM Assurance Yojana (UDAY) program of reforms in November 2015, aiming to address the deficiencies of distribution companies in the country and has made it available to the states. UDAY entails States taking over 75 percent of DISCOMs' outstanding debt over two years – 50 percent in FY16 and 25 percent in FY17. Under the scheme, the debt taken over will be excluded from the calculation of fiscal deficit in FY16 and FY17 – allowing the State to maintain current levels of capital and social expenditures. The UDAY program is centered around four initiatives (i) Improving operational efficiencies of DISCOMs; (ii) Reduction of cost of power; (iii) Reduction in interest cost of DISCOMs; (iv) Enforcing financial discipline on DISCOMs through alignment with State finances.

In turn, the Government of Rajasthan (GoR) has elaborated a plan of legislative, financial and institutional actions in the form of 10 SUTRAs, which are aligned to GoI's plan and aim to strengthen the governance of the State-owned utilities, assist with the financial restructuring, and establish operational performance criteria and incentives for the recovery of the sector. The proposed program operation of the World Bank is expected to support these efforts and contribute to reversing the financial degradation of the sector and contribute to long-term stability in the supply of electric power.

II. Operation Objective(s)

The proposed programmatic operation would support the Government of the State of Rajasthan in its goals of establishing a financially sustainable distribution sector under the 24x7 Power for All (PFA) program. This first operation, in a series of two single tranche operations, consists of an IBRD loan US$250 million and would support the State Government's reforms in the electric power sector, focusing in particular on the performance of companies carrying out the distribution of electricity. The World Bank operation will contribute to the comprehensive reform program developed by the GoI and the State government to improve the financial, operational and technical performance of the electricity distribution utilities of Rajasthan.

The main areas of the GoR program that are supported by the proposed operation are:

(A) *Strengthening Governance in the Rajasthan Electricity Distribution Sector.* The State's DISCOMs were established in the early 2000s, but their organizational and institutional structures have not followed the modernization and best practices of corporate governance and human resource management (e.g. lack of employee incentives) from more successful State owned enterprises in India. The state government is keen to provide more operational autonomy to the utilities, establish targets for reducing the gap between the cost of supply and revenues recovery, provide incentives to employees for improving performance achieving targets and institute more accountability for the performance of key personnel. It has hence taken the following prior actions under this pillar:

- Rajasthan has issued and notified the Electricity Distribution Management Responsibility Ordinance;
- The DISCOMs have developed and obtained approvals for their Employee Performance Incentive (EPI) schemes;
- The DISCOMs have completed the audited financial statements for FY 14-15.

(B) *Financial Restructuring and Recovery*. With an aim to improving the financial health of the sector, the state government intends to: (i) address the immediate financial pressures of the DISCOMs by transferring a considerable amount of the debt of the

DISCOMs to the State (recognizing its implicit responsibility as the owner of the companies); (ii) bring a more disciplined approach to submissions by the DISCOMs to the regulatory commission for annual revenue requirements and tariff revisions; and (iii) better focus the DISCOMs efforts on increasing transparency and competition to reduce the costs of energy procurement. It has thus taken the following prior actions:

- The Union Government, Rajasthan and the DISCOMs have entered into tri-partite MoUs for the implementation of UDAY program;
- The DISCOMs have filed with RERC their annual revenue requirements and tariff petitions for FY16;
- Rajasthan has set up the Rajasthan Energy Development Corporation Ltd, a company aiming to bring transparency and optimize power purchases on behalf of DISCOMs.

(C) *Improving the Operational Performance of Distribution Utilities.* The state government intends to agree on clear performance targets with the management of DISCOMs in order to lay the foundations for better accountability in the sector. It has initiated a set of actions to improve financial management and move towards modernizing the monitoring and control of the distribution network, including through the introduction of new technologies (smart metering, pre-paid metering program and energy efficiency lighting). These prior actions include:

- The DISCOMs have approved Business Plans for improved operational performance and initiated its implementation, including on: (i) Pre-paid Metering Program for government consumers; and (ii) The Energy Efficiency Lighting Program.

III. Rationale for Bank Involvement

The proposed reform program supports the World Bank's twin goals of poverty reduction and shared prosperity. The Country Partnership Strategy (CPS) for India focuses on assisting lower income states, such as Rajasthan, while recognizing the importance of good quality electricity services to enable economic growth and fight poverty. Improving the performance of the electricity distribution sector will ensure the provision of electricity at quality levels and provide the necessary environment for further investments in the sector. This will allow funding to extend electrification to unserved rural and poor areas and further improve the quality of supply for a broader customer base and commercial and industrial development.

IV. Tentative financing

Source:	($m.)
Borrower	0
International Bank for Reconstruction and Development	250
Borrower/Recipient	0

	250
Total	

V. Tranches *(if applicable)*

VI. Institutional and Implementation Arrangements

Monitoring and evaluation of the results of key actions is an integral part of the proposed operation. The main objective of the project concerns performance improvements and key indicators have been agreed under the tripartite agreements stipulated in the GoI's UDAY initiative. Furthermore, advanced metering systems, pre-paid metering, and the performance incentive schemes elaborated under the GoR's program for management and employees, will contribute to continuous monitoring and evaluation of the program. Indeed, under current arrangements implemented with the GoR's task force for the turnaround of the sector, regular progress meetings are held on a monthly basis that follow key operational milestones of the current action plan. The distribution companies are therefore increasingly accustomed to regular monitoring and reporting procedures.

VII. Risk and Risk Mitigation

The overall risk for the proposed loan is Substantial. Reforms of power sector distribution companies are often difficult, because of the broad social and economic reach of electric power supply, with distribution utilities being the main interface between millions of customers and power supply provision. Resistance to change can be found within the sector, as well as among some electricity users, who could benefit from the weak governance and deficient operational practices of the companies. These utilities typically have yet to develop a performance-oriented culture, while processes and systems have been slow to modernize. The companies are accustomed to running substantial cash flow deficits year after year, and receiving considerable State government subsidies.

Nevertheless, in contrast with similar initiatives of the past, Rajasthan has now a window of opportunity to mitigate and address some of the key risks. Firstly, State and Central governments have shown political commitment at the highest levels for sector reform. Secondly, there is a broad consensus in Rajasthan, and throughout the country, that the financial losses of the distribution sector have now compounded to an amount that begins to threaten the overall sustainability of the sector, as distribution companies cannot service their debt obligations without unbearable tariff increases. Moreover, the financial distress of the distribution companies is raising questions about financial institutions with significant exposure to the utilities and/or other power sector projects that depend on the financial cash-flows of the distribution sector for their revenues. As a result, the UDAY scheme of the GoI is more comprehensive and detailed than previous efforts. Still, the State-ownership of distribution utilities in Rajasthan requires sustained political will, over a number of years, to maintain performance improvements and the focus on restoring financial sustainability.

Sustaining initiatives for performance improvements and increasing the autonomy of the distribution companies will remain the main risks in the short-term. To achieve the ambitious recovery targets, distribution utilities will need continuous efforts and investments for at least three years, so that modernization investments can materialize, new systems and procedures are put in place throughout the utilities, and better financial results can emerge. External technical assistance to assist the companies and the Government throughout the period is underway through trust-funded activities, while during the second phase of the program the Bank's support could include a small-scale technical assistance loan.

VIII. Poverty and Social Impacts and Environment Aspects

Poverty and Social Impacts

A Poverty and Social Impact Analysis (PSIA) carried out in support of the proposed operation identifies three ways in which the poor may be affected. Firstly, the reform process could improve the reliability, quality and quantity of electricity supply. These improvements will be pro-poor as those not connected, or facing low-quality supply, are overwhelmingly the poorer and more vulnerable households in the state. However, there are two channels that may negatively impact the poor: (i) elimination of illegal/unmetered consumption due to activities aimed at the reduction of AT&C losses of the DISCOMs; and (ii) an increase in tariffs along the lines of the submitted tariff petitions, which are to be approved by an independent regulator.

The vigilance measures proposed under the DPL to reduce distribution losses such as smart and pre-paid metering, frequent energy audits, consumer indexing and effective employee engagement are likely to have the biggest impact on households with illegal connections. To address any concerns of affordability and mitigate the impact of higher tariffs, the promotion of energy efficient lighting is proposed under the DPL. This measure would result in considerable savings in the form of reduced electricity consumption and, therefore, lower electricity expenditures especially for poor households that primarily use electricity for lighting. These, along with the proposed vigilance measures, would result in financially more stable DISCOMs with potential positive effects on improving access to electricity and the quality of power for the poor and vulnerable social groups such as the Scheduled Tribes.

Sustained improvements in electricity supply and progress with the Power for All program should benefit the lives of women and girls in Rajasthan. Access to modern energy in general and electricity in particular, contribute to health, livelihood, and gender benefits. Women and girls are often primarily responsible for household activities that become substantially easier and less time-consuming when reliable electricity is available. Moreover, electricity facilitates increasing economic and empowerment opportunities for women, better education outcomes for girls, as well as overall better safety and health. While this operation does not include gender-specific prior actions, it will contribute positively to gender issues, because of its overall objective of improving the quality of electricity supply and increased access.

Environment Aspects

There are no significant negative impacts of the current operation. The proposed operation's objectives of improved operational performance, efficiency gains, and reduction of losses should have a positive environmental impact in Rajasthan. Losses in the distribution system encourage wasteful use of energy and therefore increased emissions from thermal power plants, which in Rajasthan are predominantly coal-based. With reduced losses, the project is expected to contribute to lower carbon dioxide emissions and reduced local pollutants. Increased efficiency gains will have a positive impact on the emission of greenhouse gases (GHG) due to the encouragement to deployment of LED lamps and other related energy efficiency measures.

IX. Contact point

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