Program Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 23-Jan-2018 | Report No: 122923

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
INDIA	P159669	Second Programmatic Electricity Distribution Reform Development Policy Loan for Rajasthan	
Region	**Estimated Board Date**	**Practice Area (Lead)(s)**	**Financing Instrument**
South Asia Region	29-March-2018		Development Policy Financing
Borrower(s)	**Implementing Agency**		
Republic of India	Energy Department, Government of Rajasthan		

Proposed Development Objective(s)

The program development objectives are to support the turnaround of the electricity distribution sector in Rajasthan, by:
 * Strengthening the Governance Framework;
 * Enhancing policies to Restructure its Finances; and
 * Improving its Operational Performance.

Financing (in US$, Millions)

SUMMARY

Total Financing	250

DETAILS

Source:	
IBRD	250
Co-financing	-

Decision

The summary Decision from the Decision Meeting is authorization to appraise the DPF.

B. Introduction and Context

Country Context

1. **Economic growth slowed into FY17/18[1], but already shows signs of recovery.** One-time policy events – disruptions from demonetization in November 2016 and the introduction of the Goods and Services Tax (GST) in July 2017 – slowed somewhat India's economic momentum. Real Gross Domestic Product (GDP) growth slowed to 7.1 percent in FY16/17 from 8 percent in FY15/16, and further to 5.7 percent in Q1 FY17/18, but picked up somewhat to 6.3 percent in Q2. Construction, real estate and manufacturing activity were particularly affected by both policy events. Manufacturing production, in particular, decelerated sharply pre-GST as producers ran down inventories, but recovered in Q2. Public and private consumption gained pace due to the implementation of the 7th Central pay commission recommendations and a revival in rural demand after a normal monsoon in FY16/17, but overall demand slowed as public investments started to wane and private investment remained feeble.

2. **Growth is likely to remain subdued in FY17/18, but momentum will pick-up in later years.** Evidence suggests that post-GST manufacturing and services contracted sharply during FY17/18. However, Q2 GDP data and high frequency indicators suggest that activity has stabilized – maintaining the annual GDP growth at 7.0 percent in FY17/18. Growth is projected to increase gradually to 7.4 percent by FY19/20, underpinned by recovery in private investments, which are expected to be crowded-in by the increase in public infrastructure investments, and an improvement in the investment climate partly due to passage of GST, which will simplify tax payments, and Bankruptcy Code, as well as measures to attract Foreign Direct Investment (FDI).

3. **The electricity sector in Rajasthan has expanded and improved over time, but was facing serious financial challenges in 2015 that threatened the sustainability of supply going forward.** The financial distress facing the DISCOMs in Rajasthan in FY15 was not unique, though the State's DISCOMs had the highest amount of debt among all of India's DISCOMs[2]. With a view to finding a sustainable solution to the DISCOM financial troubles, GoI announced a financial restructuring and operational improvements plan in November 2015 – UDAY or the Ujwal DISCOM Assurance Yojana – for the DISCOMs.

4. **The UDAY scheme aims to achieve long-term financial sustainability by addressing the source of DISCOM losses, which are largely operational.** The UDAY scheme is centered around four initiatives: (i) improving operational efficiencies, including reduction of losses and of revenue requirement adjustments; (ii) reduction of power generation costs through the optimization of fuel logistics and pricing, as well as transparent competitive bidding; (iii) reduction in interest cost of DISCOMs by requiring State governments to absorb and restructure about 75 percent of the DISCOMs debt through longer term and lower cost bonds; and (iv) enforcing fiscal discipline by converting the previously implicit liabilities to explicit liabilities of the state and financing DISCOM deficits by the States, while restricting further lending by financial institutions to finance DISCOM losses. To ensure that the incentives of the States and the DISCOMs are aligned, UDAY anticipates that, from FY18, losses of DISCOM's will be explicitly absorbed by the State's budget (on a sliding scale) without further accommodation by the Central government on the limits set in the Fiscal Responsibility and Budget Management (FRBM) law (3 percent of GSDP).

[1] FY17/18 refers to the fiscal year ending March 31, 2018, and so on.
[2] Across India, DISCOMs were having accumulated losses of approximately INR 3,800 billion and outstanding debt of approximately INR 4,300 billion (as of March 2015), with interest rates up to 14-15 percent.

Relationship to CPF

5. **The proposed reform program supports the World Bank's twin goals of poverty reduction and shared prosperity.** The Country Partnership Strategy (CPS) for India FY13-17 focuses on assisting low income states, such as Rajasthan, while recognizing the importance of good quality electricity services to enable economic growth and poverty reduction. The current CPS includes the energy sector under its economic integration and inclusion pillars. The proposed operation supports the economic 'integration' pillar (which includes support to the infrastructure sectors including removing inefficiencies in the power transmission and distribution) and the 'inclusion' pillar of the strategy by ensuring continued service delivery of electricity. A reformed power sector will require lower fiscal subsidies in the medium-term and result in reduced contingent liabilities that will create fiscal space for more growth-enhancing and poverty-targeted interventions. Improving the performance of the electricity distribution sector will ensure the provision of electricity and provide the necessary environment for further investments in the sector. Such investments will allow for funding to extend electrification to unserved rural and poor areas and further improve the quality of supply for a broader customer base, and facilitate commercial and industrial development.

C. Proposed Development Objective(s)

6. **This operation is the second in a series of two Development Policy Loans (DPLs) that supports the Government of Rajasthan (GoR)'s program for the turnaround of the distribution sector in Rajasthan under the *24x7 Power for All* program.** The DPL series is aligned to the broader reform program —developed by the Government of India (GoI) and the State government—to improve the performance of the electricity distribution utilities (DISCOM) of Rajasthan thereby contributing to the state's fiscal sustainability, and the objectives of the 24x7 Power for All (PFA) initiative, which aspires to provide continuous, reliable power supply to all households in Rajasthan by 2019.

7. **The program development objectives are to support the turnaround of the electricity distribution sector in Rajasthan,** by: (a) Strengthening the Governance Framework; (b) enhancing policies to Restructure its Finances; and (c) Improving its Operational Performance.

Key Results

8. **The key result indicators include:** (a) Disbursement of Employee Performance Incentive, (b) Date of availability of audited accounts, (c) Annual loss of DISCOMs to be taken over and funded by State, as provided under UDAY Program, (d) Gap between Average Revenue Realised and Average Cost of Supply, (e) Aggregate Technical and Commercial (AT&C) losses (%), (f) Number of consumers put on pre-paid/ AMI/ AMR meters, (g) Number of LED lamps distributed, (h) Percentage of positions filled in IT cadre in DISCOMs, and (i) Number of unelectrified Households in State.

D. Program Description

9. **This second operation builds upon UDAY and the foundations for legislative changes and institutional reforms to improve the sector's governance that were laid during the first operation**. It carries further the financial restructuring of the sector, and deepens the reforms with actions on improving operational performance. The reform program of GoR and the DISCOMs in the State is centered on two key frameworks: (a) UDAY, which Rajasthan joined in January 2016; and (b) the Rajasthan State Electricity Distribution Management Responsibility (RSEDMR) Act, enacted in

March 2016, which aims to reform the governance of the DISCOMs and brings more public accountability to the DISCOMs and hence to the sector.

10. **The operation supports the Government efforts to create a financially sustainable and commercially oriented electricity distribution sector and improve the credit worthiness of the DISCOMs.** This can then support government's goal of providing electricity access to all households, improve service delivery and enable a scale-up in private investment towards the development of the renewable energy.

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

(A) Strengthening the Governance Framework in the Rajasthan Electricity Distribution Sector: Measures supported under this pillar seek to provide more operational autonomy to the utilities, institute employee accountability for utility performance, and strengthen the corporate governance framework of the utilities. The prior actions supported under this pillar include:

- The GoR has entered into Memoranda of Understanding with each of the DISCOMs setting out targets for key performance indicators regarding: (a) Aggregate Technical and Commercial (AT&C) losses; (b) energy accounting and auditing; (c) billing and collection efficiency; and (e) filing of revenue and/ or tariff petitions for FY17-18.
- The DISCOMs have approved a Transfer Policy and Performance Management Policy for their employees.
- The DISCOMs have started the implementation of their Corporate Governance and Financial Accountability Plans, duly adopted by their Boards of Directors, by publishing their audited financial statements for FY16-17.

(B) Enhancing Policies to Restructure Finances of the Rajasthan Electricity Distribution Sector: The policy reforms supported under this pillar are aimed at bringing financial sustainability and commercial orientation to the electricity distribution sector. Measures under this pillar will support the government's plans bring revenues closer to the cost of supply for the DISCOMs through: (i) reduction in interest costs 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) bringing in a more disciplined approach to submissions by the DISCOMs to the regulatory commission for annual revenue requirements and tariff revisions; and (iii) improving the focus of the DISCOM's efforts on increasing transparency and competition and increasing share of renewables, to reduce the costs of energy procurement. The prior actions supported under this pillar include:

- The DISCOMs have filed with RERC their annual revenue requirements and tariff petitions for FY17-18.
- Rajasthan Urja Vikas Nigam Ltd. ("RUVNL") is operational, and power purchases (including renewable energy purchases) for DISCOMs are made through RUVNL.

(C) Improving the Operational Performance of Distribution Utilities: Measures under this pillar are aimed at improving enhancing transparency in energy consumption, reducing AT&C losses, modernizing the monitoring and control of the distribution network, including the introduction of new technologies such as smart metering, pre-paid metering program and energy efficient lighting. The prior actions supported under this pillar include:

- The DISCOMs have published periodic energy audits of 90% of their respective feeders at their websites and initiated, since December 2016, a Loss-Based Load Scheduling Program;
- The DISCOMs have implemented a unified billing system including starting billing large and medium industrial consumers based on an automated meter reading system; and
- The DISCOMs have: (a) started implementation of their approved IT Roadmaps by preparing detail

project reports for ERP deployment; and (b) created an IT cadre and started filling the posts with IT professionals.

E. Implementation

Institutional and Implementation Arrangements

12. **Monitoring and evaluation of the results of key actions is an integral part of the proposed operation.** The main objective of the operation concerns performance improvements and relevant 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, KPI based performance management system 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[3] for the turnaround of the sector, regular progress meetings are held monthly to follow key operational milestones of the current action plan. In addition, the DISCOM's management reviews performance indicators regularly. The DISCOMs are therefore increasingly accustomed to regular reporting procedures. This approach has been further strengthened through the prior actions envisaged under the proposed program – for instance, under UDAY, a committee at national level with representatives from Ministry of Power and Ministry of Finance is now regularly reviewing the performance on regular basis and a national level portal (www.uday.gov.in) has been established that collates data from all States, which have joined UDAY, and provides relative ranking in terms of improvements made. Further, additional monitoring systems under the Rajasthan State Electricity Distribution Management Responsibility Act have also been put in place wherein the Chief Secretary of State also reviews the performance on regular basis. These measures contribute to increasing the sector's transparency and public accountability.

F. Poverty and Social Impacts and Environment Aspects

Poverty and Social Impacts

13. **A Poverty and Social Impact Analysis (PSIA) has been carried out in support of the proposed program.** The PSIA seeks to identify the potential impacts of the proposed program on the poor and vulnerable households (interchangeably referred to as below poverty line (BPL) households and households in the bottom quintile) in Rajasthan. The analysis uses data from a primary survey of residential electricity consumption conducted in two districts of Rajasthan to study the potential impacts on the poor. The PSIA identifies the channels which can have direct impacts on the welfare of the poor - namely, (a) improvements in access and supply quality, (b) the control on informal connections, and (c) price incentive as per the tariff order for FY17-18. The impact of these can be analyzed by broadly categorizing them along the three dimensions of access, affordability and quality of power.

14. **Access to electricity is high** in the state of Rajasthan with the primary survey data revealing that 99 percent of urban households (HHs) and over 92 percent of the rural HHs are connected to electricity in the two districts. The National Family Health Survey (NFHS) of 2015-16 reflects these findings, reporting a 91 percent electrification rate (99 percent urban, 88 percent rural) in the entire state. Improvements in household access under the DPL is therefore expected to be along the remaining 10 per cent of the poorest households in rural areas.

[3] A three member task force was constituted by the State Government in February 2015 to help the State in its efforts towards turning around the sector.

15. **Affordability of electricity is moderately high under the current tariff schedule**. While the tariff schedule is progressive over the income distribution, the price incentives provided in the tariff schedule combined with the fixed and energy charges, implies that the share of electricity expenditures on household's income is about 10.7 percent for the poorest households. As per Foster and Yeppes (2006), electricity is globally considered affordable if the share of electricity over income is about 6 to 8 percent. Based on this benchmark, electricity is moderately affordable.

16. **Higher costs faced by informal connections on account of controls are mitigated by better supply quality**. HHs with potentially informal connections belong to the bottom two quintiles of income distribution in the two districts and tend to possess BPL cards more than formally connected HHs in their region. As the DISCOMs start tightening informal connections, HHs in these informal categories can potentially find electricity prices to be unaffordable. However, based on their appliance ownership and the reported daily usage, the total electricity usage of these HHs is currently quite low – implying that their share of expenditures on electricity under current prices will be low as well. Moreover, improved quality of supply through a formal electrical connection may lead to an overall increase in household income. The higher price of formal connections can therefore be mitigated by income increases due to higher supply quality.

17. **Improvements in supply quality will improve welfare outcomes of all HHs including poorer ones.** Lower quality of supply in the form of power cuts affects welfare by adversely impacting children's education more than other HH activities. The percentage of HHs reporting an adverse impact on education due to power cuts is highest in the lowest quintiles of the income distribution –potentially reflecting the limited coping strategies available to poorer HHs to deal with these power cuts. Thus, improvements in supply quality will result in positive impacts for all HHs affected by power cuts but the intensity of the effect will be potentially higher for the poorer HHs.

18. **To protect against future increases and save on electricity consumption, the DPL includes measures to promote the use of energy efficient lighting.** This measure would result in considerable savings in the form of reduced electricity consumption and, therefore, lower electricity expenditures especially for poor HHs that primarily use electricity for lighting. One of the key objectives of the national scheme entitled UDAY is to promote energy efficient solutions. 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.

19. **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 contribute to health, livelihood, and gender benefits. Women and girls are often primarily responsible for HH activities that become substantially easier and less time-consuming when reliable electricity is available. Better supply quality can also enhance efficient intra-household allocation of labor and capital in economic activities – for example allowing households to make use of electromechanical appliances. 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.

Environmental Aspects

20. **The reforms supported by this operation are not likely to have adverse effects on the environment and natural resources.** The proposed reforms to improve operational performance, efficiency gains, and reduction of losses should have a positive environmental effect 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 measures to encourage development of renewable energy and reduce losses, the project is expected to contribute towards slowing down the rate of growth/ lowering carbon dioxide emissions and reducing local pollutants. Increased efficiency gains will have a positive impact on the emission of greenhouse gases (GHG) due to energy efficiency measures.

G. Risks and Mitigation

21. **The proposed operation faces substantial risks.** Reforms of state power sector distribution companies are often difficult because of the broad social and economic reach of electric power supply, combined with financial sensitivity, and significant future costs uncertainty. These risks are mitigated by the demonstrated commitment of the Central and the State governments, as evidenced by their efforts to increase managerial and public accountability and detailed monitoring of the sector. Still, the fact that DISCOMs in Rajasthan are primarily under state ownership means that that a sustained political will to follow-through with the implementation of reforms will be indispensable to maintain performance improvements and restoring financial sustainability.

22. **Sustaining initiatives for performance improvements and increasing the autonomy of the distribution companies will remain the main short-term risks.** To achieve the ambitious recovery targets, DISCOMs will need continuous and sustained focus on performance improvements. The government and the DISCOMs have shown commitment to move in that direction as demonstrated by the declining trend in AT&C losses and their initiative to award the distribution franchisee of four cities to private players with encouraging initial results. The GoR and DISCOMs are working on pilot alternative models to further involve the private sector in distribution sector operations. This gradual approach is also expected to incite comparisons with the incumbent utilities and could result in overall improvements.

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