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Program Information Document (PID)

Concept Stage | Date Prepared/Updated: 06-Apr-2022 | Report No: PIDC260614

BASIC INFORMATION

A. Basic Program Data

Country	Project ID	Parent Project ID (if any)	Program Name
India	P177844		Program for Electricity Distribution Sector Reforms in India
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Does this operation have an IPF component?**
SOUTH ASIA	10-Oct-2022	30-Nov-2022	Yes
Financing Instrument	**Borrower(s)**	**Implementing Agency**	**Practice Area (Lead)**
Program-for-Results Financing	REC Limited	REC Limited	Energy & Extractives

Proposed Program Development Objective(s)

The Program Development Objective is to improve the financial health and operational efficiency of select electricity distribution companies in India.

COST & FINANCING

SUMMARY (USD Millions)

Government program Cost	1,210.00
Total Operation Cost	1,210.00
Total Program Cost	1,200.00
IPF Component	10.00
Total Financing	1,210.00
Financing Gap	0.00

FINANCING (USD Millions)

Total World Bank Group Financing	500.00
World Bank Lending	500.00
Total Government Contribution	710.00

Concept Review Decision
The review did authorize the preparation to continue

B. Introduction and Context

Country Context

1. ***India's Gross Domestic Product (GDP) growth was already slowing when the COVID-19 outbreak unfolded.*** Real GDP growth moderated from an average of 7.4 percent during FY15/16-FY18/19 to an estimated 3.5 percent in FY19/20[1]. The growth deceleration was mostly due to (i) shocks in the financial sector, and (ii) decline in private consumption growth[2]. Against this backdrop of pre-existing weaknesses, the outbreak of COVID-19 had a significant impact, with real GDP contracting by 6.6 percent in FY20/21[3]. On the fiscal side, the general government deficit widened significantly in FY20/21, owing to higher spending and low revenues[4]. With the easing of Covid-19 restrictions, Goods and Services Tax (GST) collections have crossed INR 1 trillion mark every month from July to December 2021. The robust GST revenues are expected to continue as the economic recovery gathers momentum. Given the significant uncertainty pertaining to epidemiological developments, the real GDP growth[5] for FY21/22 is likely to be in the range of 7.5 to 12.5 percent, while growth in FY22/23 is expected to be 8.7 percent[6]. The expected recovery will put India among the world's fastest-growing economies over the next two years.
2. Although India has made remarkable progress in reducing absolute poverty in recent years, the COVID-19 outbreak has delayed the course of poverty reduction[7]. Between 2012 and 2017, India's poverty rate is estimated to have declined from 22.5 percent[8] to values ranging from 8.1 to 11.3 percent[9]. However, recent projections of GDP per capita growth, considering the impact of the pandemic, suggest that poverty rates in 2020 have likely reverted to estimated levels in 2016[10]. Labor market indicators from high frequency surveys -including from the Centre for Monitoring Indian Economy (CMIE)- suggest that vulnerability has increased, particularly for urban households. Overall, the pandemic and its economic impacts are estimated to have raised urban poverty, creating a set of "new poor" that are relatively more likely to be engaged in the non-farm sector and to have received at least secondary education.

Sectoral (or multi-sectoral) and Institutional Context of the Program

[1] National Accounts Data, National Statistical Office, Ministry of Statistics and Program Implementation (MOSPI).
[2] National Accounts Data, National Statistical Office, MOSPI.
[3] National Accounts Data, National Statistical Office, MOSPI.
[4] Union budget 2021, 2022, Ministry of Finance.
[5] World Bank Global Economic Prospects, January 2022.
[6] World Bank real GDP forecasts for FY22/23 are broadly in line with the projections of the Government of India.
[7] World Bank projections. Government of India has deployed significant resources for social assistance, including towards urban poor households and migrants.
[8] Consumption Expenditure Survey 2011-12, National Sample Survey Office (NSSO), Government of India.
[9] World Bank estimates. Source: Poverty and Shared Prosperity Report, 2020.
[10] World Bank estimates. Source: Macro Poverty Outlook, 2020.

3. **India's rapid economic development and growing population require a power system that can meet the demand for higher quality and cleaner electricity services.** The country's power sector is one of the world's largest and complex, having undergone dramatic transformation since the enactment of the Electricity Act (EA) of 2003. Over the past decade[11], India's economic development drove annual growth of peak power demand and energy demand to 4.2 percent and 4.1 percent, respectively. Large national programs have expanded electricity access to nearly every household today, up from only 67.2 percent of households in 2011. India is the third largest consumer of electricity globally, yet per capita electricity consumption of 1,208-kilowatt hour (kWh) for FY20 is only slightly above one-third of the global average. Energy demand is expected to grow rapidly with rising incomes, industrialization, and urbanization (which drives adoption of modern appliance use and cooling demand). According to International Energy Agency (IEA), India is expected to be the largest source of primary energy growth globally through 2040.[12]

4. **India is slowly moving towards a high share of renewable energy in the overall energy mix.** While the installed generation capacity stood at 395 GW at the end of January 2022, there is steady growth in the quantity and competitiveness of renewable energy (RE) in the generation mix, especially from wind and solar. RE, excluding large hydropower, currently represents 26.6 percent of installed generation capacity. At the COP26 Summit in November 2021, Government of India (GoI) announced to increase its RE capacity to 500 GW and achieve 50 percent of its overall energy needs with RE by 2030. A critical risk factor towards the achievement of this goal would be the financial stress of the off-taker distribution utilities (Discoms).

5. **Electricity distribution is the weakest link in the entire value chain of the Indian power sector**. While India has made impressive strides in adding generation capacities and has a well-managed inter-state transmission system (managed by Central government-owned POWERGRID Corporation), electricity distribution (which for most parts is managed by state-owned Discoms) continues to perform poorly on most financial and operational parameters. Under the Indian Constitution, electricity is mentioned in the concurrent list, wherein both Central and state governments can frame policies on electricity sector, but the responsibility for the distribution of electricity to consumers lies with the states. Since the late 1990s, several reform initiatives and schemes have been launched to upgrade the electricity distribution infrastructure and help the Discoms improve their operational and financial health. These have yielded mixed results and a sustainable turnaround of the electricity distribution sector is yet to be achieved.

6. **In most states, the financial outlook for the Discoms remains negative limiting their creditworthiness.** This is due to the following key issues:

   i. **High levels of aggregate technical and commercial (AT&C) losses.** Electricity distribution system across states suffers from high level of commercial losses due to theft, poor billing, low collections. Weak electricity distribution network has also resulted in relatively high technical losses, but these are of an order of magnitude lesser than the commercial losses. During FY19-20, at all India level, Discoms had a billing efficiency of only 83 percent and collection efficiency of 93 percent, leading to an AT&C loss level of 20.4 percent.

   ii. **Annual revenue requirement of Discoms is not fully met by tariffs.** Apart from the delays in the Discoms themselves in filing for tariff, the State Electricity Regulatory Commissions (SERCs) also disallow full recovery of key expenditures (with respect to operational and capital expenses) to be included in the tariff estimation. All these aspects affect the determination of adequate revenue requirement for the Discoms. The average all India revenue gap was INR 0.6/kWh in 2019-20[13], against an average cost of supply of INR6.2 /kWh.

11 Calculated for 2011–2020. Central Electricity Authority. 2020. Growth of Electricity Sector in India from 1947–2017.

12 International Energy Agency. 2018. World Energy Outlook. 35 p.

13 Excluding grant under UDAY scheme or extraordinary regulatory income

iii. **Delay in release of subsidy by state governments and pendency of bills from government departments:** As the tariff for certain category of consumers (e.g. domestic-rural, agriculture) is often subsidized as a result of government policy, state-owned Discoms are dependent on the government releasing the underwritten subsidy amounts to sustain their operations. Though the regulatory provisions provide for timely receipt of subsidy by the Discoms from the state government, in practice, the receipt of subsidy is either delayed or falls short due to constrained state finances. The tariff subsidy booked by Discoms was INR 1199 billion (US$16 billion) in 2019-20, while the outstanding dues against this subsidy from state governments was INR 718 billion (US$9.6 billion) in June 2021. The delays in release of subsidies impact the ability of Discoms to manage their operating costs. Further, there are huge outstanding payments (INR 520 billion or US$6.93 billion as of June 30, 2021) towards bills raised by the Discoms for electricity consumption by various state government departments and agencies.

iv. **High level of debt**: As a result of these under-recoveries and outstanding dues from state governments, Discoms are forced to take short-term loans from commercial banks and non-banking finance companies, typically at high interest rates. The debt level of Discoms has been rising every year with the overall debt of the Discoms reaching INR 5.14 trillion (US$68.6 billion) at the end of FY20. With the loans obtained under Covid relief measures, the gross debt level of state-owned Discoms in India is expected to reach INR 6 trillion (US$80 billion) in FY22. This high debt leads to a vicious cycle of further deterioration in financial health and impacts the Discoms ability to invest in network strengthening for delivering quality and reliable supply.

7. **The distribution sector's ongoing financial stress has a ripple effect on the entire sector's value chain (particularly upstream generation sub-sector) and is a risk to maintaining India's energy transition trajectory.** At the end of December 2021, Discoms owed INR 1,237 billion (US$16.5 billion) to the electricity generation sector out of which approximately 20 percent was to RE generators[14]. Additionally, the Discoms owe the state-owned Gencos around INR 630 billion (US$8.4 billion). These financially stressed Discoms constitute a significant off-taker risk to the generation segment (including RE generation), and there is a growing recognition that to meet the Nationally Determined Contributions (NDC) targets and sustain India's economic goals, it is imperative to reform the electricity distribution sector.

8. During the last twelve months, GoI has announced two important initiatives to support reforms in the electricity distribution sector**.**

a. **Relaxing limits under Fiscal Responsibility and Budget Management (FRBM) Act to incentivize power sector reforms**: In June 2021, GoI on the recommendations of the XV Finance Commission announced a relaxation in states' borrowing limit [increase of 0.5 percent of Gross State Domestic Product (GSDP)] linked to their performance in the power sector. This window shall be available for a four-year period from FY21-22 through FY24-25 subject to states meeting defined performance criteria for the electricity distribution sector. The pre-condition for availing this relaxation includes a combination of reform actions and performance parameters to bring the distribution sector back to financial health.

b. **Revamped Reform-linked Result-based Distribution Sector Scheme (RDSS)**: In July 2021, GoI launched RDSS scheme to assist Discoms improve their operational efficiencies and financial sustainability. States that meet the scheme's qualifying criteria on reforms are provided results-linked financing to strengthen their supply infrastructure. The scheme has an outlay of INR 3,038 billion (US$40.5 billion) over 5 years i.e., FY21-22 to FY25-26, including an estimated Government Budgetary Support (GBS) of INR 976 billion (US$13 billion). The scheme aims to improve the quality, reliability, and affordability of power supply to

14 https://praapti.in/

consumers through a financially sustainable and operationally efficient distribution sector. Nodal agencies for the scheme are PFC and REC.

Relationship to CAS/CPF

9. The proposed project is consistent with the World Bank Group (WBG) Country Partnership Framework (CPF) FY18–FY22 discussed at the Board on September 20, 2018 (Report No. 126667-IN), particularly the first focus area on promoting resource-efficient growth, and more precisely with the specific objective (1.4) on increased access to sustainable energy. As per the CPF, World Bank Group is committed to supporting the sectors and areas that are critical for facilitating growth and poverty reduction while promoting greater resource efficiency. The program is well aligned with this priority area since it will help to strengthen the electricity distribution sector's operational efficiency and financial sustainability, which is critical to achieve the energy transition goals. Implementation of distribution reforms that promote sustainability through loss reduction and operational efficiency improvement, catalyze investments to accelerate the deployment of smart meters, and strengthen the institutional capacity of various power sector institutions are required to address gaps in power distribution sector.

Rationale for Bank Engagement and Choice of Financing Instrument

10. The proposed Program builds upon the World Bank's support over the last 7-8 years to reforms in electricity distribution through state level engagements under India's 24x7 Power for All Program. Through this Project, the World Bank is building upon a long engagement with the Ministry of Power (MoP) which includes several financing operations in electricity distribution, transmission and generation, including in the renewable energy value-chain. The learnings from these engagements have helped the World Bank develop a wide-ranging platform of solutions, which will inform the proposed operation. This project will form part of a programmatic approach to improve the commercial performance of the electricity distribution sector across India.

11. The Program-for-Results (PforR) instrument was determined to be best suited for the World Bank's support to GoI's large and transformative program. GoI's FRBM relaxation and RDSS program are results-linked schemes that will provide financial assistance to Discoms based on meeting a pre-qualifying criterion and achieving basic minimum benchmarks in reforms. This structure of the GoI program lends itself directly to the structure of the PforR instrument. A PforR operation will (a) provide stronger focus on the implementation of critical reforms and initiatives in electricity distribution in alignment with GoI's FRBM relaxation and RDSS scheme, (b) improve the capacity of government agencies to deliver the program through their own systems and procedures, and (c) provide flexibility and efficiency in supporting an ambitious government program.

C. Program Development Objective(s) (PDO) and PDO Level Results Indicators

Program Development Objective(s)

12. The Program Development Objective is to improve the financial health and operational efficiency of select electricity distribution companies in India.

PDO Level Results Indicators

13. The PDO-level results indicators are:

a. Reduction in ACS-ARR gap in selected Discoms (INR/kWh)

b. Reduction in aggregate technical and commercial losses in selected Discoms (percent)

D. Program Description

PforR Program Boundary

(a) **Government Program**

14. FRBM relaxation scheme: The FRBM relaxation scheme led by Ministry of Finance, provides incentives for implementing reform in the electricity sector, and hence, forms part of government program being supported by PforR. For availing benefits under the scheme, the state government and the respective Discoms are required to meet a set of prequalifying conditions. According to these conditions, the state government must a) take over future losses of state-owned Discoms in the prescribed manner – 60 percent of the financial loss for FY22, 75 percent for FY23, 90 percent for FY24 and 100 percent for FY25 & onwards, b) support the Discoms in implementing reform measures to improve financial performance. Among other measures, these include: (i) 100 percent metering of consumers; (ii) transparency in subsidy declaration through unit wise subsidy and its payment through DBT; (iii) payment of electricity bills by Government Departments / Offices / Local Bodies; (iv) privatization of electricity distribution etc. The performance of the state government and their respective Discoms are evaluated based on a methodology that includes scores for undertaking these reform measures. The state governments will be allowed additional borrowing between 0.35 percent and 0.50 percent in proportion to the scores obtained by them. The technical secretariat for this operating this scheme is REC Ltd.

15. Revamped Distribution Sector Scheme (RDSS): The GoI's RDSS scheme, led by MoP as a complementary effort to the FRBM relaxation scheme, will also be a part of the government program supported by the PforR. Under the RDSS, GoI will provide financial assistance to the Discoms subject to their undertaking actions aimed at improving their operational and financial performance. The scheme provides for an annual review of the Discom's performance against predefined and agreed upon performance trajectories across four broad categories: (a) financial sustainability; (b) operational - outcomes of infrastructure works; (c) infrastructure works; and (d) policy and structural reforms, capacity building and Information Technology (IT)/ Operational Technology (OT) enablement. Actions within each category carry a certain percentage weight and Discoms must score minimum marks to be eligible for financing from the scheme (funding for smart meters has been excluded from the scoring and would be available to each Discom irrespective of their performance against the evaluation matrix).

(b) PforR Program Boundary:

16. The proposed World Bank financed PforR Program supports a portion of the Government Program (FRBM relaxation scheme and RDSS) and will focus on those policy and structural reforms, and limited investments (metering and associated ICT systems only) that are essential to achieve the financial sustainability and operational efficiency of state-owned Discoms. While the government scheme covers all Discoms, the proposed Bank program will target three or four states who demonstrate willingness to undertake deeper reforms. Further, the World Bank PforR program is expected to be implemented by REC Ltd (a financial intermediary), which is also the nodal agency of the RDSS scheme and GoI's main technical partner for the FRBM relaxation scheme.

17. The Bank supported PforR program is proposed to cover the following result areas:

a. **RA1: Enhance financial performance of electricity distribution sector**: Under this result area, the focus would be on bringing discipline to the timelines related to tariff petition filing and determination process, and release of subsidy dues by state government. Further, the focus would also be on funding of any revenue gap of Discom by state government to improve the cost recovery ratio and wean the Discoms off costly new short-term debt.

b. **RA2: Improve operational efficiency of electricity distribution sector:** The focus under this area would be two-fold: (a) encourage private sector participation in full or part of the Discom operations (in keeping with the criteria for the FRBM relaxation scheme); and (b) for Discom expected to remain in government-ownership, improve operational efficiencies. For the first focus area, it is proposed that models suitable to the business needs and the local context in various states shall be supported. For the second focus area, ICT interventions related to improving and automating the commercial and business processes in the Discoms, and feeder-level energy accounting shall be supported.

c. **RA3: Improve transparency in subsidy determination and delivery:** The focus under this area would be on improving transparency in tariff-subsidy determination and delivery. This would include unit-wise subsidy determination, and explicit mention of such subsidy in consumer bills for domestic consumers. Further, the FRBM relaxation scheme incentivizes the implementation of Direct Benefit Transfer (DBT) mechanism for release of the electricity subsidy directly to the consumers instead of the state Discoms. The PforR would consider support for introducing pilots on DBT for electricity consumption in agriculture categories.

d. **RA4: Strengthening corporate governance practices in Discoms:** The Discoms (which are restructured state-owned utilities under the Company's Act, 1956 or the Companies Act, 2013) typically display some gaps in their adherence to generally accepted good corporate governance principles. Robust corporate governance practices can help to ensure that there are appropriate systems and policies in place for successful implementation and monitoring of various schemes and capital expenditure. It is expected that the states which are part of the PforR program shall prepare a corporate governance improvement plan and implement high priority actions there-of.

e. **RA5: Improving generation planning towards increased share of renewable energy:** Given that power purchase costs of a Discom constitute about 80 percent of their overall costs, any inefficiency in power purchase directly impacts the consumer tariffs. There is a need to design a mechanism to develop resource adequacy plans and meet the power requirements of the Discoms in a way that it is most techno-commercially viable and environmentally sustainable.

(c) IPF Component:

18. Technical Assistance (TA) as an Investment Project Finance (IPF) Component: The proposed operation will include TA for capacity building of Discoms, and for supporting the implementation of reforms. The proposed activities under the TA will include consultancy support for (i) preparation resource adequacy plans for Discoms (especially to incentivize and manage RE resources optimally) (ii) preparation of roadmaps for modernization of commercial and business management systems and processes for Discoms, (iii) strengthening of regulatory process (iv) support for implementing PPPs in distribution (v) preparing suitable models for implementing pilots for direct benefit transfer for electricity consumption for certain section of consumers (vi) support in RDSS monitoring, program audits, and independent verification agent costs. This component will also be implemented by REC Ltd., which shall be responsible for procuring and managing/implementing various consultancies. Though small, the TA is critical for the success of the operation, and REC provides a credible intermediary for engaging with multiple stakeholders and deepening/ institutionalizing the work through their on-going (and future) activities in the sector.

E. Initial Environmental and Social Screening

19. The proposed Program intends to support the operational and financial performance of Discoms in the country and the Bank will support the program in selected (three to four) states through REC Ltd for institutional and capacity building reforms. The operation will be financed through a hybrid of Program for Results (PforR) and Investment Project Financing (IPF) financial modalities. The PforR while the primary instrument for support of the program through funding US$ 490 million, the IPF is proposed to finance for Technical Assistance of about US$ 10 million for specific activities related to project management, training, and capacity building by REC.The proposed operation IPF financing modality of TA involve developing implementation support and capacity building of implementing agency and Distribution Companies (Discoms).

20. The environmental and social risk management policies related to both P4R Program and IPF will be applied for this project for the REC and the selected states. An Environmental and Social System Assessment (ESSA) will be conducted, consulted, and disclosed by the Bank to evaluate risk related to Environmental and Social aspects under the project programs. The ESF applies only to the TA component which is financed through IPF. The proposed activities under both the P4R and IPF have no physical environmental and social footprints.

21. The Environmental and Social Systems Assessment (ESSA) will be conducted, consulted, and disclosed align with OP/BP 9.00 core principles by the Bank before project appraisal. The ESSA will identify any areas that could benefit from systems strengthening. Going forward, as part of Program preparation, an ESSA will be undertaken by the Bank's Task Team to understand the environmental and social impacts, risks, benefits, and opportunities associated with the proposed operation. The ESSA will review the capacity of existing systems to plan and implement effective measures for environmental and social management of the Program and determine if any measures will be required to strengthen it. It will also verify/validate findings of preliminary assessment carried out at the PCN stage. The assessment will be undertaken to ensure consistency with six "core principles" outlined in the Bank's Guidance Document for ESSA preparation (July 2019) to effectively manage Program risks and promote a sustainable operation. The assessment will cover a review of relevant government policies, regulatory framework, codes, institutional set-up, Program guidelines/procedures and an analysis of the extent to which these are consistent with the World Bank's Policy (November 2017) and Directive (June 2019) on PforR Financing. Based on the findings from the assessment, gaps (if any) will be identified, and actions will be suggested to manage the risks and enhance benefits from the operation.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts of the IPF Component

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