Program Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 16-Sep-2018 | Report No: PIDA24874

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Rwanda	P166458	Second Rwanda Energy Sector Development Policy Operation (P166458)	P162671
Region	Estimated Board Date	Practice Area (Lead)	Financing Instrument
AFRICA	16-Nov-2018	Energy & Extractives	Development Policy Financing
Borrower(s)	Implementing Agency		
MINECOFIN	MINECOFIN, MININFRA		

Proposed Development Objective(s)

The Program Development Objective (PDO) of the proposed operation is to enable fiscally sustainable expansion of electricity services. The proposed operation is built around two pillars: (i) containing the fiscal impact of the electricity sector; and (ii) improving the operational efficiency, affordability, and accountability of electricity service.

Financing (in US$, Millions)

SUMMARY

Total Financing	125.00

DETAILS

Total World Bank Group Financing	125.00
World Bank Lending	125.00

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

Rwanda's National Strategy for Transformation (2017-2024) aims to lay the foundations for achieving upper middle-income country status by 2035 and high-income status by 2050; achieving universal electrification is a fundamental step towards these development objectives. Rwanda's current development strategy is laid out in its latest seven-year plan, the National Strategy for Transformation for 2017-2024 (NST1). The NST1 is guided by the Sustainable Development

Goals (SDGs), the Africa Union Agenda 2063 and its First 10-Year Implementation Plan 2014-2023, and the East African Community (EAC) Vision 2050. NST1 identifies the importance of universal electricity access for achieving the envisioned social transformation and aims to expand electricity access to 100% households by 2024. The strategy envisages expansion of electricity sector based on least-cost principles and competitive procurement to provide quality, reliable, and affordable electricity to consumers, and aims prioritizing energy intensive industries and productive uses of electricity as measures to reduce the cost of doing business in Rwanda. The electricity sector targets underlying the NST1 are underpinned by Rwanda's impressive progress in electrification. Investments in grid extension have increased grid connections from 6 percent in 2009 to 33 percent at the end of January 2018. Off-grid access has more than doubled since 2016 and is estimated at 12 percent at the end of January 2018. This puts the nationwide electrification rate at 43 percent, up from 6 percent in 2009. The expansion of access has been accompanied by tripling of generation capacity from 76 MW in 2010 to 213 MW in December 2017.

This DPO series supports a Government reform program that proactively addresses the fiscal risks related to the expansion of electricity service to achieve universal access to affordable, sustainable and reliable electricity by 2024. Despite recent progress, Rwanda's cost of electricity service delivery is among the highest in the region (around US$0.28/kWh in FY2017/18), and tariffs are barely enough to cover operating cost of the utility, Rwanda Electricity Group (REG). The Government of Rwanda has been stepping in to fill the gap between sector cost and revenues and provide grants for capital expenditure. Electricity subsidies are budgeted at 1.4 percent of GDP in FY2017/18 and at 1.5 percent of GDP for FY2018/19. Plans for rapid system expansion during NST1, already only possible at relatively high costs due to country's lack of low-cost domestic energy resources, carried significant fiscal risks because (a) contracts with private developers to develop capacity were procured through bilaterally negotiated deals rather than competitive procurement; (b) the country prioritized costlier domestic sources over cheaper supply from neighboring countries (e.g., Ethiopia, Kenya, or Uganda); (c) investment planning was inconsistent with least-cost planning principles; and (d) there is limited scope for tariff increases as electricity is already unaffordable for much of the population. Subsidies could rise significantly by 2020 if the GoR adheres to its business-as-usual sector expansion practices, undermining the fundamentals of the sector, crowding out public spending on other priority areas, and imposing a major risk for medium- and long-term fiscal sustainability and macroeconomic stability in Rwanda in general. The reform program supported by the DPO addresses these fiscal risks through a Policy and Results Matrix underpinned by the principles of least-cost planning, competition, accountability, and operational efficiency.

Relationship to CPF

The focus on energy by this program is directly aligned with the most recent Rwanda Country Partnership Strategy FY2014–2018 (Report No. 87025-RW) and also with the World Bank's twin goals. The series contributes directly to Theme 1 of the Country Partnership Strategy: "Accelerating economic growth that is private-sector driven and job-creating." Under this theme, energy is highlighted as the key sector for World Bank support because increased access to electricity/energy services is core to both increased private sector investment and improved social welfare. Besides, increased access to reliable and affordable electricity supply lowers the cost of doing business, promotes job creation, improves citizens' connectivity and access to opportunity, and strengthens resilience to climate change. Through these effects, the DPO is aligned with the World Bank's twin goals of reducing poverty and promoting shared prosperity.

C. Proposed Development Objective(s)

The Program Development Objective (PDO) of the proposed operation is to enable fiscally sustainable expansion of electricity services. The proposed operation is built around two pillars: (A) containing the fiscal impact of the electricity sector; and (B) improving the operational efficiency, affordability, and accountability of electricity service.

Key Results

Result indicators under the three-part DPO series are categorized under the two pillars and constituting sub-pillars as follows:

Indicator	**Baseline**	**Target**
A1. Contain electricity subsidies as % of GDP	1.4% (FY2016/17)	Not more than 1.4% (FY2020/21)
B1. Ensure all generation and transmission projects initiated or accepted by the Government over the past 24 months are consistent with the LCPDP and comply with the PPP Law and competitive procurement procedures.	No (September 2017)	Yes (December 2020)
B2. Initiate competitive procurement processes to implement investments identified in the LCPDP.	0 (September 2017)	At least 1 (December 2020)
B3. Expand electrification rate countrywide (percentage of households)	September 2017: 40.7% (29.7% on-grid and 11% off-grid) *Of which, female-headed households: [To be determined once EICV5 data is available at the end of September 2018].*	December 2020: 61% (38% on-grid and 23% off-grid) *Of which, female-headed households: [To be determined once the baseline was determined]*
B4. Expand electrification rate among rural households (percentage of households)	June 2017: 16% *Of which, female-headed households: [To be determined once EICV5 data is available]*	Target value to be determined during appraisal of DPO 2, based on final NEP *Of which, female-headed households: [To be determined once the baseline was determined]*
B5. Ensure REG's financial statements are in full compliance with IFRS, their independent audit is without qualifications, and they are published within the first two quarters of the following year and distributed to key stakeholders.	No (September 2017)	Yes (December 2020)
B6. Reduce total electricity losses as a percentage of electricity supply	22% (FY2017/18)	19% (FY2019/20)
B7. Reduce average duration of interruptions (SAIDI) and average frequency of interruptions (SAIFI)	SAIDI: 44 hours SAIFI: 265 (2017)	SAIDI: 28 hours SAIFI: 183.4 (2020)
B8. Implement and publish annual customer satisfaction survey	No (2017)	Yes (FY2020)

D. Project Description

The proposed Energy Sector DPO in the amount of SDR [tbc] million (equivalent to US$125 million) is the second in a programmatic series of three DPOs. The PDO of the proposed operation is to enable fiscally sustainable expansion of electricity services in Rwanda. The proposed operation is built around two pillars: (a) contain fiscal impact of the electricity sector and (b) improve the operational efficiency, affordability, and accountability of electricity service.

To proactively address the fiscal risks from the electricity sector, this DPO series supports a program that includes measures to respond to the urgency of the situation but also lay the foundation for a sustainable sector capable of providing reliable and affordable energy services. This short- to medium-term reform program is underpinned by the principles of least-cost planning, competition, accountability, and operational efficiency and consists of the following main elements, captured through the prior actions:

(a) Putting in place a fiscal policy for the electricity sector that balances the Government's sector expenditure priorities and fiscal sustainability objectives (supported under Pillar A of this DPO series; see **Error! Reference source not found.**)

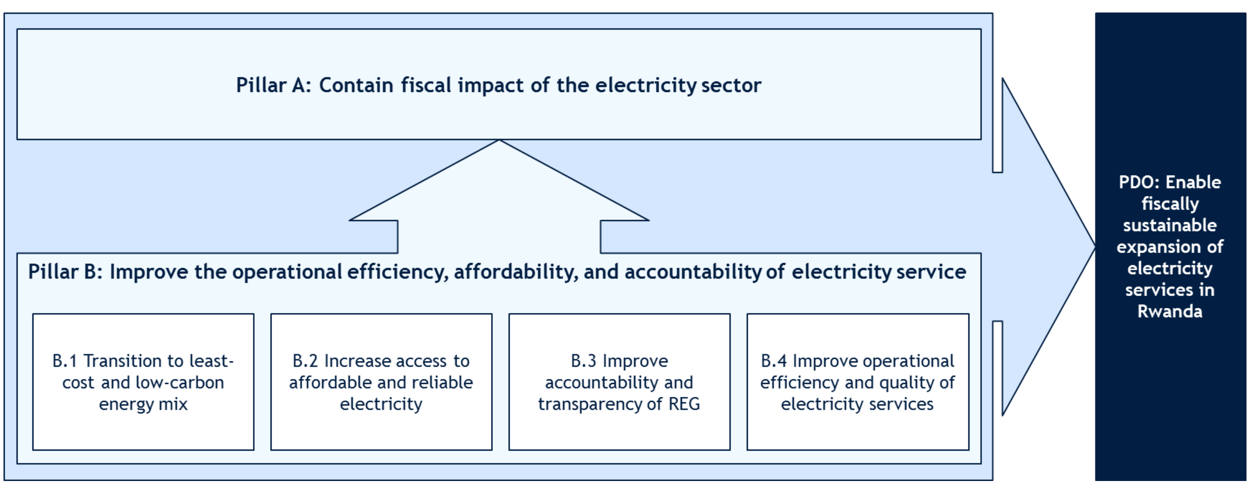
(b) Institutionalizing least-cost principles in the scheduling and procurement of new power plants, including in the short term, by moving from ad hoc, bilaterally negotiated investments to adoption of least-cost sector planning and competitive procurement, as well as including strengthened regional electricity trade in least-cost planning (Pillar B.1)

(c) Promoting the transition to low carbon energy by reforming the legal framework for renewable energy generation and developing grid-connected hydropower and solar power (Pillar B.1), and by removing barriers for off-grid solar energy (Pillar B.2)

(d) Reforming its electrification program to make electricity access more affordable, including by leveraging the private sector for mini-grids and off-grid solar (Pillar B.2)

(e) Taking measures—including the transition to International Financial Reporting Standards (IFRS)-compliant accounting and commercial independence—to improve transparency of fiscal impacts and enable REG, which is in charge of electricity utility services provision, to tap commercial financing for sector expansion, and become a financially viable offtaker (Pillar B.3)

(f) Improving operational efficiency of REG, through strengthened resource management in the utility, systematic monitoring of quality of customers' commercial service and quality of electricity supply, and independent performance evaluation of REG (Pillar B.4)



E. Implementation

Institutional and Implementation Arrangements

The operation is jointly implemented by MINECOFIN and MININFRA. Monitoring the progress toward the achievement of the program's objectives is the responsibility of the line ministry, MININFRA, with support from the REG and its subsidiaries. To facilitate the process, MININFRA has established a working group with representatives from MINECOFIN, MININFRA, the REG, and its subsidiaries. In addition, a high-level Steering Committee has been set up to coordinate DPO 2 and DPO 3 and address any challenges in real time.

F. Poverty and Social Impacts and Environmental Aspects

Poverty and Social Impacts

The prior actions under this operation are expected to have substantially positive poverty and social impacts by providing access to reliable and affordable electricity service of improved quality to households and businesses. Relevant reform measures underpinning the prior actions of DPO-2 include tariff review to raise average cost-recovery level establishing competitive procurement procedures for privately owned energy infrastructure, adoption of technically sound planning and investment procedures for expanding electricity access to all households, and improving overall quality of supply of electricity. Taken together, these measures are expected to increase REG's revenues, bring down the cost of supply of electricity, and enhance the availability, reliability, and quality of electricity supply to households and businesses. The tariff reviews in 2017 and 2018 have raised average tariffs while having minimal poverty impacts because almost all household consumption has been exempt from tariff increases. The development of new energy infrastructure, including of mini-grids, will follow international best practices with regard to land acquisition, an area where Rwanda has a good track record. A simplified licensing framework for mini-grids, currently being revised by Rwanda Utilities Regulatory Authority (RURA), will ensure that project implementation conforms to national standards and that consumers are protected. The development impacts of these measures are expected to be driven through the typical channels through which electricity access helps alleviate poverty. For instance, the Impact Evaluation of the Rwanda Electricity Access Rollout Program and Sectorwide Approach Development Project found several positive impacts of electricity access, such as: increased income and consumption spending, quality and value of houses, and asset creation. Electrification was also found to decrease household monthly energy expenditure (excluding electricity) and biomass collection costs and time and increase time spent on education by children and time used for tutoring children.

Environmental Aspects

The specific policies supported by this operation are not expected to have any negative effects on Rwanda's environment, forests, water resources, habitats or other natural resources, while certain prior actions are expected to have positive environmental impacts by supporting the development of renewable electricity in Rwanda. By following least cost planning procedures and institutionalizing competitive procurement of electricity, the reforms under this operation are expected to improve the utilization of low-cost hydropower in the electricity mix and reduce the need for expensive and polluting fossil fuel capacity. Furthermore, adoption of planning and investment procedures to expand electricity access through off-grid sources would also facilitate substantial expansion of renewable sources of electricity. No prior actions under the operation are expected to have any negative environmental effects. Besides, Rwanda has in place adequate environmental controls and legislation under the mandate of Rwanda Environment Management Authority (REMA), providing support to line ministries including MININFRA in incorporating environmental guidelines in the operational manual for its programs. The World Bank is supporting REMA with technical assistance to take into account climate risks and opportunities and on land policy related issues, along with technical assistance to review sustainable land management practices.

G. Risks and Mitigation

The main risks to the PDO relate to sector governance, technical adequacy of sector strategies and policies, and institutional capacity. To mitigate sector governance risks, the Government has taken steps to promote institutional independence, including by piloting competitive recruitment of key staff and senior managers of the sector institutions (for example, the CEO and CFO of REG). Moreover, the Government is engaging RURA, an independent sector regulator with a track record of independent tariffs decisions and utility performance reviews, in the program development and implementation. To mitigate risks related to the technical adequacy of sector strategies and policies, the results indicators of this operation are outcome oriented, and MININFRA is committed to continuously monitoring progress of the LCPDP, electrification targets, access policies and regulations, and implementation of utility reforms. The Government's overall reform track record is widely recognized and gives confidence in the Government's ability to sustain implementation of programmatic reform efforts. Strong continuity of reforms was demonstrated, for instance, under three consecutive series of World Bank-supported DPOs in the SP sector (a total of nine operations over 2009–2017). To mitigate risks related to implementation capacity, the World Bank is providing additional World Bank-executed TA, including the financing of experts to coach and mentor new utility staff in the aspects of utility operations and management; additional technical advisers will be provided to MININFRA and the REG, if the need arises.

CONTACT POINT

World Bank

Yadviga Viktorivna Semikolenova, Joern Torsten Huenteler
Senior Energy Economist

Borrower/Client/Recipient

MINECOFIN
Ronald Nkusi
Director, External Finanace Unit, Ministry of Finanace and E
Ronald.nkusi@minecofin.gov.rw

Implementing Agencies

MINECOFIN, MININFRA
Ronald Nkusi
Director, External Finanace Unit , Ministry of Finance and E
Ronald.nkusi@minecofin.gov.rw

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s):	Yadviga Viktorivna Semikolenova, Joern Torsten Huenteler

Approved By

Country Director:	Yasser El-Gammal	04-Oct-2018