Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 13-Sep-2023 | Report No: PID204

BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Operation ID	Operation Name	
Somalia	P181341	Accelerating Sustainable and Clean Energy Access Transformation in SOMALIA	
Region	Estimated Appraisal Date	Estimated Approval Date	Practice Area (Lead)
EASTERN AND SOUTHERN AFRICA	01-Sep-2023	15-Nov-2023	Energy & Extractives
Financing Instrument	Borrower(s)	Implementing Agency	
Investment Project Financing (IPF)	Federal Ministry of Finance Somalia	Ministry of Energy and Water Resources	

Proposed Development Objective(s)

The PDO is to increase access to renewable energy through private sector participation in Somalia

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	Yes
Is this project Private Capital Enabling (PCE)?	Yes

SUMMARY

Total Operation Cost	**118.50**
Total Financing	**118.50**
of which IBRD/IDA	**100.00**
Financing Gap	**0.00**

DETAILS

World Bank Group Financing

International Development Association (IDA)	100.00
IDA Grant	100.00

Non-World Bank Group Financing

Trust Funds	18.50
Green Climate Fund	18.50

Environmental and Social Risk Classification	Concept Review Decision
Substantial	The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

Somalia is facing severe development challenges. The country has a population of a little over 15 million, of which roughly 60 percent are nomadic and semi-nomadic pastoralists, and 60 percent live in rural areas. About 70 percent of the population lived below the poverty line (US$1.90 a day in 2011 purchasing power parity terms) before the onset of COVID-19 pandemic. With the pandemic impact withering down, economy had slowly been recovering with GDP growth rebounding to 2.9 percent in 2021, following a contraction of 0.3 percent in 2020. The country however continues to contend with increasingly frequent shocks in the context of widespread fragility, conflict, and violence. Repeated climate-related shocks such as cycles of droughts, floods, and locust infestation, higher international commodity prices as a result of the Russian invasion of Ukraine, as well as security incidences have interrupted Somalia's growth trajectory and slowed the transition from fragility. Growth has been low and volatile averaging only 2.8 percent in 2014–22 with no growth in real GDP per capita. The recent prolonged drought, with a fifth consecutive season of failed rains, was particularly devastating to the economy against the backdrop of higher commodity prices following Russian invasion of Ukraine. These paused 2021's modest economic recovery from the pandemic with a slowdown in real GDP growth to an estimated 1.7 percent in 2022. Furthermore, 7.1 million people—nearly half of the population—were food insecure at the end of 2022 due to the drought and 1.3 million people were displaced. The economy is expected to make a modest recovery in the medium-term with real GDP growth projected to recover to 2.8 percent in 2023 and increase to 3.7 percent in 2024 and 3.9 percent in 2025.

The project will provide essential electricity services to "Build Back Better" and boost socio-economic recovery in the country at a critical time of vulnerability. While Somalia has shown progress in the economic growth trajectory, the impacts of the pandemic, locusts, and the ongoing draught are expected to put a downward pressure on the already high levels of poverty, with possible inter-generational impacts. Access to reliable and affordable electricity supply, is critical for improved sales and profits of businesses, cost reduction, and job expansion. It is also a pre-requisite input for the provision of adequate health and education services, which is often not sufficient in urban areas and completely absent in rural ones, impeding resilience to the pandemic, future shocks, and the overall human development of the country. The project will provide improved electricity services in the main load centers. Improved access and lower cost electricity supply will support economic activities in the main existing markets. This will contribute to reducing unemployment (currently at 13 percent), particularly of the youth (currently at 17 percent) and support broader economic recovery.

Through the provision of clean electricity, the project will also decrease the country's vulnerability to natural disasters and climatic changes - expected to increase in both frequency and severity - which in turn could strongly impact on-going conflicts. The livelihoods of roughly half of Somalia's population is reliant on pastoralism or agro-pastoralism, which implies that a significant portion of Somalia's population remains highly vulnerable to climate change and natural disasters. Since 2019 for instance, Somalia has experienced devastating floods and drought, as well as locusts, which have left about 5.2 million people in need of assistance and at risk of food insecurity. In addition, while Somalia has very low greenhouse gas emissions, it is highly vulnerable to the impacts of climate change. Somalia is ranked 181st out of 188 countries in terms of its vulnerability to climate change impact. Climate and disaster risk screening indicates that Somalia has a high risk of river, urban and coastal floods, landslides, extreme heat and wildfires, which will add additional stress to Somalia's vulnerability, particularly given its high economic dependence on climate-sensitive activities such as agriculture and densely populated coastline.

Sectoral and Institutional Context

The conflict destroyed public electricity infrastructure in Somalia. Pre-conflict, the Somalia National Electric Corporation (ENEE) was the single public utility in operation, supplying Mogadishu and the main regional centers of Hargeisa, Berbera, Burao, Baidoa, and Kismayo through distributed diesel generators and localized distribution grids with a combined total installed capacity of about 70 MW and annual energy production of about 250 GWh (1987). However, public electricity infrastructure was destroyed during the conflict, and the associated public institutional frameworks are almost completely defunct at present. The energy sector in Somalia has many features common to countries in or emerging from conflict, whereby several private service providers stepped in by creating small electricity companies called energy service providers (ESPs). The most common supply of electricity in such contexts is a decentralized, private supply of electricity using relatively low-capacity medium voltage (MV) and low voltage (LV) networks with embedded small-scale high-speed diesel generators (HSDGs), initially serving their own loads and gradually expanding to serve neighborhoods. This has led to a highly fragmented electricity sector throughout the country, resulting in an inefficient and expensive supply.

With the small and fragmented fossil fuel-based systems, access to reliable and affordable electricity is beyond the reach of majority of the population in Somalia. The total estimated installed capacity in the major load centers was about 138 MW in 2020, which is inadequate to serve current and future demand, estimated to increase to between 1,000 MW to 4,600 MW by 2037[1]. The electricity access rate is estimated at 50 percent nationally implying that almost 8 million people lack access to electricity. While access in the urban areas is 70 percent, it is only 32 percent in the rural areas[2]. According to the recent household budget survey[3], 62 percent have some access to electricity, out of which a little over half has access to grid electricity and a third of those having access to only 'torch' (a flashlight that does not deliver even basic lighting access). The same survey also revealed that only about 9 percent and 40 percent of the nomadic and rural population respectively has any access to electricity. In addition to having low access to any form of reliable electricity, cost of electricity in Somalia is high. The World Bank's flagship report on Regulatory Indicators for Sustainable Energy (RISE, 2020) found that Somalia ranks in the upper 5 percent globally for power cost, and in the upper 15 percent globally for power expenditure as a share of gross national income (GNI) per household.

[1] Source: Somalia Power Sector Master Plan ,2019.
[2] Tracking SDG 7 (2022), The Energy Progress Report, Washington DC.
[3] Somalia Integrated Household Budget Survey: Main Report, February 2023

Consequently, the Somali energy sector is beset with intertwined challenges of an ad-hoc service provision and a lack of overarching regulations. Key challenges in the sector include: (i) low access rates as explained above; (ii) high cost and unreliable electricity supply (the cost per KWh in Somalia, excluding Somaliland, ranges from US$0.25–1.3 per kWh, with a weighted average of about US$0.61 per kWh; whereas in Somaliland, the cost per kWh ranges from US$0.73-0.90 per KWh); and (iii) lack of a legal and institutional enabling environment. Addressing the sector challenges will require a combination of targeted, scalable investments in critical infrastructure paired with a sustained, multi-year reform effort to establish appropriate institutional, legal, and regulatory frameworks.

The isolated mini grids operated by the ESPs will form the basis for an interconnected distribution network in the future for a national grid with the potential for wheeling and cross-network power sales. There is increasing demand for electricity, and the required generation capacity for the country is forecast to increase to 1,000–1,800 MW by 2037 (base case scenario) (**Figure 1**). Significant investments to the tune of US$3 billion would be needed throughout the supply chain in the next two decades to meet the demand. An interconnected distribution network and a transmission grid will be needed in the medium to long term to facilitate uptake of large-scale generation and new customer connections. In preparation of the interconnected systems, significant improvements in service provision and access expansion is needed in the short to medium term by hybridizing (adding solar PV and battery storage to replace/reduce fossil fuel-based generation), strengthening, and densifying the current mini grids run by the ESPs. Geospatial analysis has identified the need for a combination of complementary supply solutions of grid, mini grid, and stand-alone solutions to achieve least-cost universal electrification in the country.

This proposed ASCENT Somalia builds on the foundations of the ongoing sector interventions in Somalia. Recent and On-going World Bank-financed operations (Somalia Electricity Access Project (SEAP)[4], P173637, and Electricity Sector Recovery Project (SERP) P173088)) are helping Government to enact an enabling institutional, policy and legal framework, while also supporting increased access to affordable and clean electricity services. The recently closed SEAP has helped undertake the initial steps to operationalize the legal and policy framework, including Electricity Sector Policy of 2020 and the Electricity Act of 2023. The on-going SERP is supporting: (i) the ESPs to reduce duplicity of investments by integrating the distribution network operations and synchronizing the various generation facilities so as to increase the efficiency of the existing facilities; (ii) hybridization of existing generation facilities with solar Photovoltaic (PV) systems and Battery Energy Storage Systems (BESS) so as to reduce the continued reliance on imported diesel for power generation; (iii) human capital development by supporting access to functional health and education services; and (iv) the reestablishment of the Electricity Supply Industry (ESI) and operationalization of the regulatory functions. The SESRP proposes to harness the strengths of the existing private sector (ESPs) and enhance their capacity in creating a private-public interface for energy service delivery. The core proposition of this project is that by investing in sector capacity enhancement and network infrastructure, the Somalia government can leverage the private sector to the ESI. Further, the institutional and regulatory enhancement will support the reestablishment of transparency, trust, effectiveness, and legitimacy in the government institutions to provide an enabling operating framework for the private sector.

The Project will also support to enhance further energy sector development efforts through enabling policies and regulations so as to have a conducive institutional, legal and regulatory operating environment. The proposed operation will be complementing the proposed Regional Power Systems Transformation Project (P179036) (US$ 230million) (Board

[4] The SEAP project closed on June 30, 2023

Q4-FY24), which will support regional connectivity between Ethiopia and Somalia for the country to benefit from cheaper hydropower resources from Ethiopia under the Eastern Africa Power Pool (EAPP).

Relationship to CPF

The proposed contributes to the World Bank twin goals of eliminating extreme poverty and boosting shared prosperity. The program is aligned with the Country Partnership Framework for the Federal Republic of Somalia for the Period FY19 – 22, which explicitly identifies energy access as a catalyst for unlocking Somalia's growth potential. The activities under the proposed program focus on renewable energy generation and increased access to electricity services. The project will help Somalia's move to greener trajectory through utilisation of renewable energy, contributing to the reduction of Green House Gases (GHG) and help achieve Intended Nationally Determined Contributions (NDCs).

The proposed project aims to support the Federal Government of Somalia (FGS) National Development Plan (NDP9/2020-2024) that has a strong focus on tackling poverty and building resilience. The NPD9 outlines 5 strategies for the energy sector for the next five years: (a) Developing renewable and non-renewable energy sources to increase supply; (b) Establishing a national regulatory authority for energy market governance; (c) Strengthening the administrative and technical capacity of the federal and states ministries of energy; and (d) providing access to energy to all populations, including vulnerable groups - particularly women, the youth and displaced persons. The FGS has taken the initial steps that include: (i) Preparation and adoption of a sector development plan - the Somali Power Sector Master Plan (PSMP) - which aims at having in place the fundamental building blocks for establishing a modern energy sector in Somalia, and (ii) enacting the requisite legislation (the Electricity Act and secondary regulations).

C. Proposed Development Objective(s)

The PDO is to increase access to renewable energy through private sector participation in Somalia

Key Results (From PCN)

PDO Level Indicators include,

i. New connections under the project (number)
ii. Increase in electricity supply through renewable energy generation (MW)
iii. Distribution lines constructed or rehabilitated (km)
iv. Private sector energy companies supported (number)
v. Annual GHG emissions reduced (tCO2e)

D. Concept Description

ASCENT Somalia will build on the existing Somalia Electricity Sector Recovery Project (SOP-1, P173088) with a focus on delivering innovative DRE solutions to reduce the costs of electricity, improve reliability and to support electricity access expansion. The Project will engage with the private sector companies that are operating mini grids in the country and will provide grant funding and de-risking for mobilizing private sector investments in distributed renewable energy to hybridize and expand mini grid generation with clean energy. This will include (i) Distributed Solar Generation and expansion of

electricity connections on larger mini grids serving the capital area (exploring containerized solar PV solutions), and (ii) hybridization and expansion of mini grids outside of the capital area. These investments will be supported by a GCF grant for de-risking private capital mobilization. The Project will also set the stage for further energy sector development efforts through enabling policies and regulations that will allow the interconnection of mini grids in the future and will initiate progress in accelerating access to clean cooking.
The proposed Project has the following components:

Component 1: Distributed Solar generation and expansion of electricity connections on larger mini grids serving the capital area. This is proposed to include construction of up to 50MW Solar PV plants (each averaging 5-10MW) with Battery Energy Storage Systems (BESS) in the capital area. The IDA funding will also be used to support the associated infrastructure of connecting the solar plants to the distribution network; and to reinforce and densify the associated distribution networks to increase the number of connections and reduce network technical losses. The Component will leverage GCF grant to provide additional de-risking as required to mobilize private sector investments, including technical assistance with transaction advisory services for PPP.

Component 2: Hybridization and expansion of mini grids outside of the capital area. This component will support to scale up renewable energy generation through the hybridization (through solar PV and BESS) of selected ESPs outside of the capital. Additional de-risking will be applied through the GCF grant.

Both Component 1 and Component 2 will be supported from the Somalia portion of GCF funding under Sustainable Renewables Risk Mitigation Initiative (SRMI). The specific areas to be financed by SRMI/GCF allocation include:

(a) Transaction advisory. The funding will be used for experts (legal, procurement etc.) to assist Somalia in developing a bankable DRE/mini grid transactions to attract private investors including developing the right risk mitigation instrument.
(b) Renewable energy park infrastructure and resilience/adaptation. The funding will finance the Environment and Social (E&S) instruments and technical studies needed for the DRE/solar mini-grid projects with battery storage. These studies will be shared as part of the Request for Proposal (RFP) package for DRE Public Private Partnership (PPP) under Component 1 and hybridization of mini-grids by the private sector under Component 2.
(c) Risk mitigation instrument for mini-grid. The reimbursable grant cover the demand risk for the private sector-DRE providers/mini grids to allow for more risk averse private investments to be leveraged while reducing the cost of capital.

Component 3: Sector Capacity and Institution building. The component will further support sector capacity and institution building for a large-scale electrification program and an enabling environment for private sector investments. Sector enhancement activities will establish the sector planning and operational capacity for the implementation of a nation-wide electrification rollout program, rallying both private sector investors and development partners to the electrification agenda. The activity will also support the capacity building of the Federal Member States (FMS), which have a role in energy sector planning, implementation of investment projects, and developing regulations.

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

Summary of Screening of Environmental and Social Risks and Impacts

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APPROVAL

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Note to Task Team: This is the end of document. No further content should be added. ***Delete this note when finalizing the document.***