



Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 11-Jun-2021 | Report No: PIDA32012



BASIC INFORMATION

A. Basic Project Data

Country Mozambique	Project ID P175295	Project Name Sustainable Energy and Broadband Access in Rural Mozambique Project	Parent Project ID (if any)
Region AFRICA EAST	Estimated Appraisal Date 12-Jul-2021	Estimated Board Date 06-Oct-2021	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Economy and Finance	Implementing Agency Ministry of Mineral Resources and Energy (MIREME), Fundo de Energia (FUNAE), Ministry of Transport and Communications (MTC), Electricidade de Moçambique (EdM)	

Proposed Development Objective(s)

The project development objective is to increase access to energy and broadband services in project areas and strengthen the operational performance of the electric utility.

Components

- On-grid Peri-urban and Rural Grid Electrification
- EDM operational performance
- Off-Grid electricity access and clean cooking solutions
- Broadband Access for Underserved Areas and Target Groups
- Technical Assistance and Implementation Support
- Contingent Emergency Response Component

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	205.00
Total Financing	205.00
of which IBRD/IDA	200.00



Financing Gap	0.00
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DETAILS

World Bank Group Financing

International Development Association (IDA)	200.00
IDA Grant	200.00

Non-World Bank Group Financing

Trust Funds	5.00
Energy Sector Management Assistance Program	5.00

Environmental and Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

Mozambique experienced a long period of sustained growth which was disrupted in 2016 by the hidden debt crisis and worsened by the effects of cyclones Idai and Kenneth in 2019 and the COVID-19 pandemic in 2020. The disclosure of US\$ 1.3 billion of previously undisclosed commercial debt contracted by the government¹ undermined investors’ confidence and more than halved the average rate of growth from 8.4 percent between 2003 and 2015 to 3.3 percent between 2016 and 2019. The economic situation further deteriorated in 2019 after tropical cyclones Idai and Kenneth caused massive damage to infrastructure and livelihoods² particularly impacting the income of rural households, as crop losses significantly reduced the per capita food consumption of affected households and increased poverty. The COVID-19 health crisis therefore hit Mozambique at a weak

¹ Equal to about 10 percent of GDP in non-concessional debt and was accumulated between 2009 and 2014 by issuing guarantees to state-controlled companies

² Idai estimated losses and damages total at about US\$ 2.8bn



economic moment, dimming the prospects of a nascent economic recovery and growth is expected to decline to 1.3 percent in 2020, down from a pre-COVID forecast of 4.3 percent.

The emerging conflict and fragility in the northern provinces of Mozambique is further stressing economic development with an increase in the number of internally displaced persons (IDPs). Since October 2017, the Province of Cabo Delgado, one of the poorest in the country, has been experiencing an armed insurgency focused on state targets, civilians, and industries. The rapidly escalating conflict in 2020, has left an estimated 1.3 million people in need of humanitarian assistance with approximately one third of the population of Cabo Delgado now displaced from their homes.³

The Government of Mozambique (GoM) has responded to the economic slowdown and debt accumulation through a combination of governance and fiscal measures, namely: (i) legal proceedings to address governance issues around the hidden debts case; (ii) a fiscal and monetary adjustment program; and (iii) a post-cyclone reconstruction and recovery program. Additionally, the GoM has started tackling difficult reforms such as fuel subsidies and state-owned enterprise (SOE) reform and has approved a new state-owned enterprise law in 2019 with assistance from the World Bank (WB) and the International Monetary Fund (IMF). The GoM has taken several steps to increase health spending, strengthen social protection to the most vulnerable, and support micro, small, and medium-sized businesses to mitigate the impact of the pandemic and preserve macroeconomic stability.

The five-year Government Plan (2020 - 2024)⁴ focuses on the adoption of a diversified and competitive economy, which involves identifying productive sectors with potential to increase income generation and job creation. The infrastructure sectors, such as energy, transport, and digital are vital to achievement of these priorities as cross-cutting enablers. Growth in the energy sector will draw on public and private investments in: i) power generation, with an increased contribution of renewable energy; ii) strengthening of distribution and transmission networks; and iii) expansion of electricity access, with a particular focus on rural and peri-urban areas, including a new target for electricity access at 64 percent by 2024. The expansion of telecommunications and ICT services has also been highlighted as a strategic priority, notably through: i) the development of 5G services in the provincial capitals, and the expansion of 4G services to cover all district capitals and 50 percent of administrative offices by 2024; and ii) an improvement in the Quality of Service (QoS) of ICT services.

Sectoral and Institutional Context

In 2018, GoM launched the landmark National Electrification Strategy (NES) in 2018 to provide electricity for all Mozambicans by 2030 to be implemented through *Programa Nacional de Energia para Todos* ('National Electricity Program for All'). The NES is underpinned by a geospatial electrification plan which concluded that the majority (between 70 percent and 99 percent depending on assumed demand) of the expected 7.6 million connections to close the access gap would receive electricity service through expansion of the electricity grid and the remaining would receive services through solar home systems and mini-grids as a cost-effective mix of options. Following the NES, GoM is addressing affordability constraints and has implemented a zero-connection fee policy, through Ministerial Decree no. 70/2020. Furthermore, the national tariff scheme has a social tariff bracket applied to low-income customers (US\$ 1.8/kWh for up to 100 kWh per month). The combination of the

³ IOM, 2021.

⁴ [Programa Quinquenal do Governo \(PQD\) 2020-2024](#)



two policies make access to electricity services affordable to low-income consumers in Mozambique. The NES also outlines Institutional roles to streamline implementation of the access program with a clear delineation of roles across government agencies and greater private sector participation.

However, energy access, in both electricity and clean cooking, remains low with significant rural-urban disparities. The rural electricity access rate is estimated at about eight percent, against 72 percent in urban areas. Only 17 percent of the population in the northern provinces have access to electricity (about 14 million people living without modern energy solutions). Only 4 percent of the population in Mozambique have access to clean cooking solutions all of which is concentrated in urban areas (12 percent urban areas and 0 percent rural areas)⁵. The use of clean fuels such as LPG and electricity is mostly concentrated in the cities and used by higher income households. Biomass fuels remain the main source of energy, with charcoal being the preferred fuel in most urban and peri-urban areas, and firewood preferred in rural areas. Clean fuels such as LPG and electricity are used by 3 percent of the population, and mostly concentrated in the cities. Most of the charcoal production in Mozambique uses earth-mound kilns which have an efficiency between 10 percent to 25 with 30.6 million (0.79 percent) of the forest cover lost to firewood and charcoal production every year.

The off-grid and clean cooking markets are in early stages but has shown a positive and sustained growth trend over the last few years. Between 2016 and 2020, around 90,000 off-grid products have been sold with over 40 percent distributed in the last year⁶. 71% of these systems were sold through Pay-as-you-Go (PAYGo)⁷ business models and 29% over-the-counter on cash. It is estimated that the informal products make up around 40% of the market⁸. Companies are leveraging established distribution channels through partnerships with mobile phone operators, retail store chains, and petrol stations active in Mozambique. Companies are also bundling off-grid and clean cooking products to reach the last mile consumers. The market is dynamic and rapidly evolving, with many local and foreign companies in the process of entering the Mozambican off-grid solar and clean cooking market, largely attracted by its large untapped potential as well as the availability of grant financing through donor-funded programs. Mobile money infrastructure and adoption, even though in early-stages, also present a big potential for the scale up of off-grid electrification supported by PAYGO. Around 42% of surveyed unelectrified households⁹ live within 30 minutes of mobile money agents, and 75% within one hour.

The reach of mobile money infrastructure, increasingly important in energy service provision, has been enhanced by achievements in strengthening the enabling environment in the telecommunications and broadband markets. Since 1992, the regulatory environment has progressively become more enabling due to steps taken toward increased market liberalization, unified licensing, infrastructure sharing and open access. The Telecommunications Act of 2016 (Law 4/2016) established safeguards against anti-competitive behavior to foster

⁵ SDG7 tracking Report

⁶ GOGLA, 2020 Sales Data. Includes solar lanterns, multi-light systems and solar home systems including solar panel, battery and at least one light point. Results from GOGLA Affiliates.

⁷ Products are classified as 'Cash' when sold in a single transaction (including products purchased via tenders), or as 'PAYGo', when the customer pays for the product in instalments over time or pays for use of the product as a service.

⁸ USAID, 2020. Mozambique Consumer Affordability Assessment.

⁹ Based on USAID survey which covered 2,688 households in 9 provinces, excluding Niassa and Maputo city. This survey targets, and is therefore representative of, the markets of interest to SHS companies. Unelectrified households refer to those that responded that they do not have an EDM connection (88%).



fair competition and spur investments. Regulatory achievements have fostered competition in the market, leading to a spill-over effect on the incumbent operators, who had to lower retail costs, intensify their rollout of services in rural areas and upgrade their network capacity, leading to greater penetration and improved quality of services. Mobile broadband penetration has experienced rapid growth in recent years, especially since the 3rd mobile operator, Movitel, entered the market in 2011¹⁰. Mobile has become the most common way through which Mozambicans access the internet and is likely to continue to drive adoption. The pace of investments supported by the FSAU has also recently increased, and further operationalization of the fund could accelerate the expansion of ICT services to low-income rural areas.

Likewise, access to telecommunication services is limited, with only 30 percent of the population using the internet in 2020¹¹. While Mozambique’s international connectivity is relatively well developed, with multiple connections - including two undersea international links (SEACOM and EASSy)¹², middle-mile and last-mile connectivity require urgent and significant investments. Backbone investment are primarily concentrated in major urban areas and inter-city routes, with fiber reach limited in the rest of the country. EDM also has country-wide power transmission networks with spare optical fiber capacity which could be better utilized to carry commercial data traffic. Recent estimates by IFC indicate that 3G technologies or higher reached only around 30 percent of Mozambique’s population in 2019. Around 200 villages, representing a total population of approximately 1.97 million, still have no cellular coverage,¹³ and the Northern provinces in particular are underserved. Important digital divides thus remain along urban-rural lines, primarily attributed to the lack of infrastructure in rural areas, but also to the lack of affordability of broadband services and digital devices relative to household incomes in rural areas. Similarly, a very high gender disparity exists¹⁴.

The proposed project harnesses the synergies of energy and digital connectivity in rural and fragile areas to enhance economic productivity, promote inclusive growth and build resilience in a sustainable manner. Energy is an enabler of ICT, and vice versa. Therefore, adopting a coordinated approach to exploit synergies in the mutual deployment of energy and ICT holds significant potential for improving access to energy and broadband services. It also brings together various elements to maximize impact on the poor and conflict affected population thereby supporting resilient and more equitable growth. This will be achieved by focusing on: i) target areas that are more rural in nature but without compromising the financial health of the energy utility; ii) service provision to critical social services such as schools and hospitals where private sector participation is limited in Mozambique; iii) financing that will help private sector, in particular local enterprises in Mozambique, bridge market and capacity gaps and grow as reliable partners in the provision of energy and communication services; iv) productive uses of electricity (PUE) particularly in agriculture, with a focus on inclusivity to the most vulnerable and women; v) additional activities that will help the utility improve its operational performance; vi) reducing the health risks particularly of women and children associated with traditional cooking; vii) a robust engagement with

¹⁰ Introduction of the 3rd license was facilitated through technical assistance under the IDA financed Mozambique e-Government and Communications Infrastructure Project (MEGCIP)

¹¹ “Unique” mobile-broadband subscriptions per 100 inhabitants, GSMA.

¹² A third undersea cable is underway (Liquid Sea), and possibly a fourth (Simba/Facebook), with a landing point in the north (Nacala).

¹³ List of villages provided by MTC, 2020.

¹⁴ After Access 2018: A demand-side view of mobile Internet from 10 African countries, Research ICT Africa, April 2019.



government agencies and citizens to inform areas of project intervention, including gender-sensitive ways of communication; and viii) tailored solutions to IDPs and host communities in northern Mozambique.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The project development objective is to increase access to energy and broadband services in project areas and strengthen the operational performance of the electric utility.

Key Results

- People provided with new or improved electricity services: 1,400,000
- People provided with new or improved broadband services: 580,000
- Cash-recovery index (billing index multiplied by the collection index): 78 percent



D. Project Description

Component 1: On-grid Peri-urban and Rural Grid Electrification (US\$ 110 million)

Component 1 will provide electricity services to over 3 percent of the national population (1,100,000 beneficiaries, which represents around 19 percent of the EDM's planned connections for the period ending 2023). Beneficiaries who are also provided with new or improved digital connectivity (see Component 4) will be able to purchase electricity credits by phone and EDM will be able to more easily communicate with new customers. The component will finance the design, procurement of materials and construction works required to electrify households, businesses and public facilities in the project target areas (in peri-urban and rural areas). The project will include street-lighting where needed for security and safety using energy efficient luminaires. It builds on the least cost geospatial analysis for electrification and the standard technical specifications adopted in the ongoing ProEnergia project which is expected to yield between 25-35 percent cost reduction compared with the business as usual (~ \$505/per connection). Connections will be made across the country similar to ProEnergia, and will focus on areas with lower access to electricity and higher density in terms of electrification. The proposed project will consider additional criteria in the geospatial plan such as the existence of unelectrified public facilities (schools and health centers), the inclusion of agricultural loads and the existence of areas with a high influx of IDPs or resettlement camps to reinforce the inclusion of high poverty and underserved areas. Communication campaigns will be continued as was done under ProEnergia ensuring communications are gender and culture-sensitive to avoid language barriers and reach beneficiaries at different literacy levels. EDM will be supported by an Owner's Engineer that will ensure installation contractors and supplier of materials adhere to the project specifications.

Component 2: EDM operational performance (US\$ 35 million)

Subcomponent 2a: Improvement of EDM operational performance (US\$ 25 million): The activities under this sub-component will include the following activities: (i) *Improved customer management – Information technology (IT) systems* to incorporate connected households and businesses into the commercial database of EDM; design and implementation of field campaigns to geo-reference all customers; (ii) *Improved management of business processes* - Incorporation of new enterprise resource planning (ERP) system, implementation of a fleet management system, asset revaluation; (iii) *Commercialization of EDM's fiber-optic network* – Assistance to better manage EDM's fiber-optic network and commercialize it on a wholesale, open-access basis, to support lower cost deployment of broadband services and last mile infrastructure nationwide and to generate additional revenue for EDM; and (iv) *Increased resilience of EDM* – Supply of equipment for rapid disaster response, restocking warehouses depleted of materials from past cyclones.

Subcomponent 2b: Energy efficient lighting (US\$ 10 million): This subcomponent will reduce the cost of electricity services to households, schools and hospitals, by up to 10 percent of peak demand save 40.3 GWh of electricity a year, and contribute reducing GHG emissions. This will be achieved by financing the supply of high efficiency lamps (LED lamps) to replace incandescent lamps, compact fluorescent lamps (CFLs) and fluorescent tube lamps (FTLs) in use for street lighting, selected public facilities (schools, hospitals, EDM offices) and new lamps for households to be connected by EDM (including under the proposed project). The subcomponent will reduce energy consumption from public facilities and street lighting and will reduce the associated emissions for avoided energy used. Additionally, the energy



efficient lighting will lower the monthly electricity consumption, reducing the overall bill of public entities that currently are not fully paying for services provided by EDM.

Component 3: Off-Grid electricity access and clean cooking solutions (US\$ 35 million)

Subcomponent 3a. Off-Grid solutions for electricity access (US\$ 20 million): This sub-component will expand availability and affordability of off-grid solar solutions (OGS) with a particular focus on deep rural and underserved areas prioritizing the Northern provinces¹⁵. It is estimated to mobilize approximately \$8 million of private capital to finance around 60,000 connections to households, smallholder farmers, small businesses and public institutions. It will consist of two main interventions: (i) *Households, smallholder farmers and small businesses (US\$ 12 million)* – This will finance instruments to strengthen the capacity of small and young enterprises and attract new market entrants to deliver affordable and reliable services to rural and deep-rural communities through a combination of grants and a risk-sharing facility; and (ii) *Health and education facilities (US\$ 8 million)* – This component will support supply and installation of standalone solar systems for non-electrified facilities including those to be constructed in resettlement camps, and long term O&M services for newly electrified facilities and centers with systems in place in need of improved services with the initial 2-3 years funded by the project while longer term sustainability arrangements are agreed with GOM. To enhance inclusivity, criteria for selecting firms will include gender-sensitive factors such as women-owned or women-led businesses, or businesses with an equal pay for equal job policy.

Subcomponent 3b. Clean Cooking Solutions (US\$ 5 million and US\$5 million from Clean Cooking Fund): This subcomponent will support the overall development of the clean cooking sector by creating an enabling environment and making clean cooking solutions available and affordable to households. It is expected to leverage up to \$8 million of private capital providing clean cooking solutions for 220,000 households. The absence of a coherent national strategy for clean cooking has been a limiting factor market development and the proposed project will finance technical assistance to develop and operationalize a strategy including setting targets, establishing standards and quality assurance, consumer awareness programs, business development services and testing that contextualizes the cooking habits in Mozambique. These policies will provide the basis for growing the market. This will be accomplished by expanding the results-based financing and grants facility being developed under ProEnergia and the grant facility under Component 3a to include clean cooking solutions, thereby providing incentives to attract private investments based on performance targets. The component will also provide technical assistance to develop the policy environment, build consumer awareness, and support market players.

Subcomponent 3c. IDPs, resettlements and host communities (US\$ 5 million): This subcomponent will pick up where the ProEnergia project left off- by providing basic electricity services to 25,000 households comprising IDPs and host communities affected by the ongoing crisis in Cabo Delgado allowing families to rebuild their lives, to strengthen communities and increase livelihoods. Working predominately in “permanent” settlements, this subcomponent will provide subsidies to increase the affordability of off-grid solar solutions and digital devices to households and small businesses in resettlement sites established by the government through a dedicated window under the RBF established at FUNAE. Solutions and subsidies to be provided through this IDP window will be tailored to the electricity needs and

¹⁵ An ongoing assessment to be completed prior to appraisal, including an updated geospatial least-cost analysis, will inform decisions around priority underserved and highly vulnerable districts in selected provinces.



earning power of IDPs and host community members. These tailored incentives are expected to mobilize a market component around these settlements. This sub-component is the second phase of a two-phase approach to providing energy solutions to IDPs and host communities and will complement emergency assistance provided through the ongoing ProEnergia project under phase one which is providing basic energy products to those in urgent need. Training, education and awareness building, including taking into consideration women's barriers and opportunities, will form an integral part of the proposed component to develop technical and business skills for businesses, farmers and institutions, in addition to a wider understanding the multiple benefits of sustainable practices and renewable technologies.

Component 4: Broadband Access for Underserved Areas and Target Groups (US\$ 10 million)

This component will improve access to broadband in underserved areas of Mozambique, including the Northern Provinces and IDP and resettlement camp areas, benefitting at least 580,000 people and thereby supporting efforts to improve service delivery and bridge the digital divide. The component will be executed by MTC, INCM and FSAU with fiduciary oversight provided by FUNAE. It will include (i) provision of broadband connectivity services for schools, health centers and other public service points that will also be connected to electricity services under the project; and (ii) incentives to encourage private sector deployment of mobile broadband infrastructure and services across uncovered villages, with priority for villages/locations also being served through the project's energy access initiatives. The activities are designed to mobilize significant private capital. Long term broadband services contracts under activity (i) are expected to create the business case for private sector investment in connectivity infrastructure needed to provide the required services to government while also lowering the costs and risks of providing broadband services to individuals and businesses in the surrounding area by utilizing the same infrastructure. Similarly, under activity (ii) a competitive, 'reverse auction' mechanism will be deployed to identify the lowest, one-time capital subsidy required to fill the financial gap in the business case for the selected private operator(s) to expand or upgrade their network coverage and digital services offerings in the underserved target areas. Activities under Component 4 will be complemented by demand-side measures to ensure that the ICT infrastructure is adequately utilized and further strengthen the business case for private investment, including the provision of affordable mobile devices under Subcomponents 3a and 3c and parallel initiatives funded through FSAU.

Component 5: Technical Assistance and Implementation Support (US\$ 15 million)

Subcomponent 5a. Technical assistance to MIREME (\$5 million): This component will finance activities to strengthen the policy environment in the energy sector including: a) funding for the establishment of an electrification coordination and planning unit in MIREME; b) support the analysis on the reform options for the sector as part of the review of the Electricity Law; c) assessment of low carbon options to reduce greenhouse gas emissions in the energy sector; d) preparation of an energy sector disaster response plan; e) study and pilot for stimulating electricity demand among electricity customers in order to enhance the level of electricity access for households and small businesses to improve the financial viability of serving these customers particularly those connected to the grid.; f) a Gender Assessment and Implementation Plan; g) Energy Efficiency standards development and adoption; and h) capacity building for MIREME.

Subcomponent 5b. Technical assistance and implementation support to FUNAE (US\$ 5 million): This subcomponent will support project management-related expenses and support the following: a) capacity building and consultancy services related to the development of the financing instruments, as well as increasing knowledge on women's and men's



different needs related to off-grid electricity; b) technical assessments for sizing and design of systems and standardizing technical specifications for off-grid systems in public facilities; c) strengthen monitoring and evaluation capacity in FUNAE including the establishment of a control center for remote monitoring of power supply systems installed in public facilities (schools, hospitals, community centers, amongst others); d) increase FUNAE's presence in the provincial offices across Mozambique to strengthen monitoring and evaluation; e) additional funds for a technical expert hired under ProEnergia to provide project implementation support; and f) additional funds to augment the capacity of the fund manager being hired under ProEnergia to operationalize and oversee financial instruments to be financed by the proposed project, including potential contracting of professional managers for the RSF.

Subcomponent 5c. Technical Assistance and Implementation Support to EDM (US\$ 4 million): This subcomponent will finance capacity building, technical assistance and implementation support for EDM, for project management expenses such as the financing of an owner's engineer, external audit, implementation oversight, etc. The subcomponent will enhance distribution planning by financing the purchase of tools with associated training, and finance system studies for improved system planning and operation. It will also include gender mainstreaming and will develop in-house skills for a Gender Officer in the PIU, to lead project implementation and monitoring and report on achievements, along with the provision of an organization-wide (at all levels of EDM, including managerial positions and identification of male gender champions) training program to support EDM on the Reach of Gender Equality pillar of EDM's strategy, enhanced activities for women's employment and skills development in EDM.

Sub-component 5d. Technical Assistance to MTC (US\$ 1 million): This subcomponent will support MTC with planning, coordination and implementation of the broadband related activities under the project. MTC, in partnership with INCM and FSAU will be the technical lead for all broadband activities, with procurement and fiduciary support and oversight provided by MIREME, FUNAE and EDM as relevant based on the activity. A broadband project manager/technical lead will be recruited utilizing project funds to coordinate these efforts, working closely with staff from MTC, INCM, FSAU, FUNAE and EDM. The subcomponent will also support capacity building for staff in MTC, in particular on fiduciary, procurement, and ESF oversight. With regard to technical activities, it will finance (i) the development of an operational plan corresponding to the National Broadband Strategy, including an integrated ICT/energy planning exercise, and (ii) a PPP transaction advisory consultancy and support for competitive tender processes for connectivity services under component 4. Capacity building will also be provided to train MTC staff to develop gender expertise in measuring and bridging digital gender gaps, as well as to establish and embed gender disaggregation for broadband related indicators as part of the data collected by the government.

Component 6: Contingent Emergency Response Component (US\$ 0 million: capitalized in the event of an emergency)

The objective of this component is to support GoM's response in the event of an eligible emergency. The component will be governed by paragraph 12 of the World Bank Policy on Investment Policy Financing (Rapid Response to Crises and Emergencies). In the event of an eligible emergency being declared, GoM may request the World Bank to re-allocate project funds to support the response effort.



Legal Operational Policies

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

Summary of Assessment of Environmental and Social Risks and Impacts

Environment and Social Risk is classified as Substantial to reflect the risks posed by the security concerns in parts of the project’s target areas.

Key environmental risks associated with the proposed project activities include: disposal and management of waste, occupational health and safety of workers, and community health and safety. While impacts from the operation of renewable energy for off-grid solutions have a positive impact on climate change through the reduction of greenhouse gas emissions, there are potential environmental and social risks and impacts related to the storage and final disposal of used batteries containing hazardous waste; and disposal/recycling of solar panels. Other adverse impacts are related to medium/small civil works in rural areas in the context of natural habitats close to conservation areas and coastal zones, the movement of machines and equipment, transportation and disposal of raw materials, erosion on internal areas or of coastal zones, increased dust and noise, among others.

Key social risks include: a) ensuring security for project operations and associated workers; and b) sexual exploitation and abuse, sexual harassment (SEA/H), and other forms of gender-based violence during civil works particularly in refugee/resettlement camps in Nampula and Cabo Delgado. Other impacts are related to potential economic and physical displacement of PAPs as a result of expansion and increasing access to grid-connection electricity services and potential exclusion of vulnerable groups. Mitigation: All social and environmental risk mitigation measures will be detailed in the appropriate ESF instruments.

E. Implementation

Institutional and Implementation Arrangements

MIREME, EDM and FUNAE will be the implementing agencies with fiduciary oversight of project activities expected to be implemented over five years. Project activities will be carried out by MIREME, EDM, FUNAE, MTC and INCM. MTC will be the Executing Agency for specific components under related to broadband access (Components 4 and 5d). To improve coordination, an inter-Ministerial Project Steering Committee (PSC), chaired



by MIREME and comprising members from relevant agencies will be established to provide overall policy guidance.

EDM will be the implementing agency for component 1 and TA under Component 5. Through ProEnergia and PERIP, EDM has built adequate capacity to scale activities under the project. For component 1, EDM confirmed that the implementation arrangements will follow the same arrangements as in the ongoing on-grid component of ProEnergia, incorporating lessons learned to improve execution. EDM has made internal changes to improve its project implementation performance. A dedicated PIU has been created to implement electrification projects. This has caused significant improvements in planning, procurement and project management. This dedicated team is supported by external consultants who provide technical assistance during design and implementation. A dedicated coordinator will be appointed to the PIU to coordinate the implementation of activities under Component 2.

FUNAE will be responsible for activities under Components 3, 4 and TA under Component 5c. Through ProEnergia, FUNAE has strengthened its technical and operational capacity and gained experience in preparing and managing World Bank funded operations. There are 6 dedicated full-time staff, and additional part-time technical staff and province-level focal points who provide a national presence for FUNAE. To enhance capacity to implement activities tailored to IDPs, the project will finance two additional staff to be based in Pemba with oversight for operations in the resettlement camps. The RBF Fund Manager, and Independent Verification Agency, to be established under ProEnergia, will provide a platform for scale-up and be leveraged for additional investments under this project. The clean cooking activities, particularly on the RBF, under Sub-component 3c will also be managed by FUNAE and aligned with the arrangements under ProEnergia. Given the expanded scope under the proposed ProEnergia+, FUNAE will recruit consultants for Technical and Strategic support to strengthen implementation capacity particularly on aspects of private sector engagement and enhanced service delivery to health and education facilities. FUNAE will contract the services of experienced professionals to manage the RSF.¹⁶

MIREME is the implementing agency for activities under sub-component 5a and 5d. **MTC** will be the Executing Agency for activities under Component 4 and sub-component 5d and will be the technical and coordinating lead for implementation of activities in coordination with INCM (regulation) and the Universal Service Access Fund (FSAU) (rural broadband coverage activities). MTC and INCM will be providing advisory support to EDM for activities related to infrastructure sharing and commercialization of fiber-optic spare capacity under component 2. A technical coordinator will be hired under the project to coordinate activities related to the MTC/broadband.

¹⁶ Management of the RSF may be awarded to private and experienced managers or to a public development finance institution managing nation-wide risk sharing facilities. Currently, there are no experienced public development finance institutions managing nation-wide risk sharing facilities.



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