United Nations Development Programme

Project Document template for projects financed by the various GEF Trust Funds

Project title: National child project under the GEF Africa Mini-grids Program		
Country(ies): Somalia	**Implementing Partner (GEF Executing Entity):** UNDP CO in Somalia	**Execution Modality***:* Direct Implementation (DIM)
Contributing Outcome (UNDAF/CPD, RPD, GPD)*:* UNSDCF Outcome 3.2, Output 3.2.4: The capacity of public and private (for-profit and non-profit) organizations is strengthened to expedite the growth of the information and communications technology ("digital economy") and renewable energy sectors. CPD Output 3.3: Enhanced access to clean, affordable, and sustainable energy for economic growth. National Development Priority (NDP-9, Pillar-3): Economic Development.		
UNDP Social and Environmental Screening Category: *Substantial*	**UNDP Gender Marker:** GEN-2	
Atlas Award ID: 00135174	**Atlas Project/Output ID:** 00126498	
UNDP-GEF PIMS ID number: 6328	**GEF Project ID number:** 10413	
LPAC meeting date: 20/10/2022		
Last possible date to submit to GEF: 19/06/2021		
Latest possible CEO endorsement date: 19/12/2021		
Project duration in months: 48 months		
Planned start date: 01/12/2022	**Planned end date:** 30/11/2026	
Expected date of Mid-Term Review: 31/12/2024	**Expected date of Terminal evaluation:** 30/10/2026	

Brief project description:

As part of the UNDP-supported, GEF-financed Africa Mini-grids Program (AMP), the AMP in Somalia seeks to "support access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low-carbon mini-grids in Somalia, with a focus on cost-reduction levers and innovative business models". The baseline situation is characterized by a low electrification rate (35%), the lack of electricity grid infrastructure, and the predominance of and reliance on diesel mini-grid systems, owned and operated by private Electricity Service Providers (ESPs), charging remarkably high tariffs. The project strategy corresponds to the unique nature of the energy sector in Somalia, and the AMP's concentration on clean energy, by focusing on digital transformation and institutionalization of ongoing initiatives to expand the adoption of solar PV technologies, and promote hybridization of existing diesel minigrid systems as a financially viable path to driving down tariffs and reducing GHG emissions in Somalia.

This is achieved through supporting the Government on the national and sub-national levels with: (1) operationalizing existing mini-grid policies and regulations through digital transformation, including performing techno-economic analyses, designing tools for tariff calculation, and supporting the institutional capacity building of the mini-grid public sector; (2) implementing pilot project(s) to showcase the benefits of hybridization and remote telemetry of performance monitoring and consumption tracking, as well as establishing and capacitating mini-grid industry associations to encourage and strengthen private operators and developers, and introducing academic programs to build private sector capacity to design, operate, maintain and manage solar and hybrid mini-grids; (3) assessing previous and ongoing financing schemes to develop operational guidance and offer training support to stakeholders in the domestic financial sector; and (4) running an effective M&E, QA and KM systems to oversee and guide project implementation.		
FINANCING PLAN		
GEF Trust Fund grant	USD 3,276,147	
UNDP TRAC resources[1]	USD 750,000	
(1) Total Budget administered by UNDP	**USD 4,026,147**	
CO-FINANCIERS THAT WILL DELIVER PROJECT RESULTS INCLUDED IN THE PROJECT RESULTS FRAMEWORK (FUNDS NOT ADMINISTERED THROUGH UNDP ACCOUNTS)		
(2) Total confirmed co-financing to this project not administered by UNDP	**USD 170,700,000**	
(3) Grand-Total Project Financing (1)+(2)	**USD 174,726,147**	
SIGNATURES:		
Jocelyn Mason, Resident Representative, UNDP, Somalia Country Office	**Signature:** DocuSigned by: D13061182B4D4B9...	**Date/Month/Year:** **13/12/2022**

[1] This is not a mandatory requirement.

I. TABLE OF CONTENTS

LIST OF FIGURES

SEPARATE ANNEXES

LIST OF ACRONYMS AND ABBREVIATIONS

AMDA	African Mini-grid Developers Association
AMP	Africa Mini-grid Programme
BPPS NCE-VF	Bureau for Policy and Programme Support, Nature, Climate and Energy, Vertical Fund team
CCM	Climate Change Mitigation
DIM	Direct Implementation Modality
DREI	De-risking Renewable Energy Investment
ERC	Energy Regulatory Commission
ESMF	Environmental and Social Management Framework
ESP	Electricity Service Provider
ESRES	Energy Security and Resource Efficiency in Somaliland Program
FCDO	Foreign, Commonwealth & Development Office of the United Kingdom[2]
GEEL	Growth, Enterprise, Employment, and Livelihoods
GEF	Global Environment Facility
GHG	Greenhouse Gases
GRM	Grievance Redress Mechanism
IP	Implementing Partner
KM	Knowledge Management
kWh	Kilowatt-hour
LCOE	Levelized Cost of Energy
M&E	Monitoring and Evaluation
MOEM	Ministry of Energy and Minerals in Hargeisa

[2] Formerly the UK's Department for International Development (DFID)

MG	Mini-grid
MoEWR	Ministry of Energy and Water Resources in Mogadishu
MTR	Mid-term Review
PFD	Program Framework Document
PIR	GEF Project Implementation Report
PMC	Project Management Costs
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
PSAWEN	Puntland State Authority for Water, Energy, and Natural Resources in Garowe
QA	Quality Assurance
SBS	Somali Bureau of Standards
SDGs	Sustainable Development Goals
SEA	Somaliland Electricity Association
SEAP	Somali Electricity Access Project
SEP	Stakeholder Engagement Plan
SES	Social and Environmental Safeguards
SESP	Social and Environmental Screening Procedure
SOGSGF	Somalia Off-Grid Solar Grant Facility
SQCC	Somaliland Quality Control Commission
SREF	Somaliland Renewable Energy Fund
TE	Terminal Evaluation
ToC	Theory of Change
ToT	Training of Trainers
UNDP	United Nations Development Programme
UNDP CO	UNDP Country Office
UNDP GEF	UNDP Global Environmental Finance Unit
UNDP RO	UNDP Regional Office
USAID	United States Agency for International Development
WB	World Bank

II. DEVELOPMENT CHALLENGE

i. Mini-grid baseline: Private Operator Deliver Model

Since 1991, Somalia has been witnessing decades of conflict and instability. In 2018, the Somali population was estimated to be 13 million, of which roughly 60% are nomadic and semi-nomadic pastoralists.[3] Latest revisions of the UN population prospects projects that the population of Somalia could more than double in the next 30 years to close to 35 million in 2050 (United Nations 2019). Furthermore, the Somali economy relies heavily on financial remittances from its sizeable diaspora, accounting for 1 to 1.6 billion US dollars per year. The environment and natural capital underpins Somalia's sustainable development and have been the basis for livelihoods and wellbeing of the population for generations. However, the country's natural resources are under huge pressure, degradation, and pollution due to inappropriate uses and overexploitation, conflicts, and climate change impacts such as recurrent drought, floods, and cyclones. Some of the key environmental issues include land degradation and deforestation mainly from unsustainable charcoal, pollution (water, air), unsustainable waste management and biodiversity loss.

Somalia's current GHG emissions are relatively low, estimated at 53.70 $MtCO_2eq$ which represents less than 0.03% of the total global GHG emissions. The Agriculture, Forestry, and Land-use sectors are the major contributors to Somalia's emissions. World Bank data for 2016 indicate that the GHG emissions from liquid fuel consumption in Somalia is about 645 $ktCO_2eq$. Key challenges to effective management of the natural resources include lack of and weak policy and regulatory frameworks, weak institutional arrangements, inadequate capacities, lack of public awareness and information and lack of financial resources to the management of resources. Poverty in Somalia is directly linked to the state of the environment and natural resources, with the use of extremely unsustainable land management practices, which exacerbate the ongoing adverse effects of drought on land productivity, further deepening the state of poverty.

At the time of developing this document, it was reported that all regions of Somalia neither have national grids, nor is there the infrastructure to develop one in the near future. However, the country has a dynamic and highly entrepreneurial private sector that has filled the void of government institutions, including a large base of Electricity Service Providers (ESPs). However, these vital energy service providers have limited access to finance from commercial and government banks since with the impression mini-grids systems are quite relatively unknown or risky. Also, foreign-based distributors and manufacturers perceive a high risk to doing business in Somalia and rarely offer credit to local suppliers. This leaves businesses largely self-financed and limits their ability to scale-up through the adoption of innovative models, e.g. Pay-As-You-Go (PAYG).

Climate change almost universally drives an increased demand for power, whether for cooling, increased pumping of water, other aspects. In terms of energy sources in Somalia, about 90% of electricity generation relies exclusively on diesel mini-grids that are normally zoned with each ESP building, owning, and operating the generation, transmission, distribution, maintenance, and tariff collection. The consumption of diesel at this magnitude results in domestic air pollution and an increase in GHG emissions, intensifying existing climate risks for vulnerable populations. As the goal of the AMP is to provide affordable clean power to remote areas, the demand for the project outcomes and outputs can only be seen to increase in the face of climate change. With many government resources stretched to cope with other possible impacts of climate change, sustainable mini-grids provide a means for sustainable power to reach communities which otherwise may be have been without power or would have relied on fossil fuel power the with attendant challenges and adverse effects.

The Federal Government in Somalia and Somaliland have been developing policies and regulations which could shape their aspired intervention in energy sectoral planning, including interventions to regulate the service delivery and tariff levels in the mini-grid sector.

The most relevant developments to this project are summarized below:

- National Energy Policy (2018) and the Somali Electricity Bill (2020):
    - The policy was developed by the Ministry of Energy and Water Resources (MoEWR). It presents the overall plan for the energy sector.
    - The Electricity Bill is more focused, containing an outline for the legal direction of the electricity and identify the relevant authorities which will govern the sector – both have been drafted and awaiting cabinet approval.

[3] World Bank (2018) Somali Electricity Access Project: Project Information Document/Integrated Safeguards Data Sheet - http://projects.worldbank.org/P165497/?lang=en&tab=documents&subTab=projectDocuments

- Somaliland Energy Policy (2010) and the Somaliland Electrical Energy Act (2016):
    - The policy was developed by the Ministry of Energy and Minerals (MOEM), in collaboration with Adventist Development and Relief Agency (ADRA) as part of the Somaliland Energy Policy Dialogue.
    - The Act was developed a few years later, emphasizing the need to establish the Energy Regulatory Commission (ERC) for Somaliland, to provide a framework for energy investment and consumer protection.

ii. Relevant interventions by development partners

Supporting national efforts, several development partners engaged in energy-related projects in Somalia, including:

- Energy Security and Resource Efficiency in Somaliland (ESRES), financed by FCDO (formerly DFID),
- Somali Electricity Access Project (SEAP), financed by the World Bank, and
- Growth, Enterprise, Employment and Livelihoods (GEEL), and Power Africa Initiative, financed by USAID.

As part of their implementation, the above projects developed and operated of the following financing mechanisms:

- Somalia Off-Grid Solar Grant Facility ("SOGSGF" or "Grant Facility"): SEAP project helped the establishment of this Grant Facility, to be managed by the Government of Somalia with the goal of providing grant capital to Somali distributors of IEC certified products. The Facility is not yet fully operational, and there were no project examples to study during PPG development. However, the Government recently published a call for proposals for private banks and financial services companies to apply for undertaking consultancy services constituting the role of Grant Facility Manager.
- Somaliland Renewable Energy Fund (SREF): Launched by ESRES2 in April 2019, SREF was designed to support renewable energy and energy efficiency projects and activities through dedicated "funding windows". Window 1 facilitated FCDO's investment in hybridization projects, mandating applicants to commit to financing at least 30% of the total project costs. The co-finance by ESPs is formalized by a Bank Guarantee, issued before signing the Grant Agreement with ESRES, which is one of the de-risking measures put in place to ensure the social return of the project is maintained during operation. A second de-risking measure adopted by ESRES2 was the Triangular Model for release of funds, i.e. the Grant Agreement is entered between ESRES and ESPs, the latter issues purchase orders directly to suppliers and issues invoices to ESRES. ESRES then makes the transfers directly to the suppliers, not to the ESPs. Through this model, ESRES reduces the donor's exposure to local financial risks, and increase the comfort and confidence of the suppliers by eliminating the risk associated with transactions involving local counterparts in high-risk countries, hence, encouraging the interest of recognized suppliers in the Somali market.

iii. Tariff setting and collection

In urban cities, the free-market business model results in reduced prices for end-users due to private companies competing to offer their customers the best price possible for their services/products. However, a lack of competition in the rural electrification sector in Somalia leads to the fact that tariffs applied in rural areas are among the highest in the world, reaching 1 USD/kWh in some areas making it unaffordable for the majority of a population combating poverty. Although the consultation with national stakeholders in the public sector revolved around the need to drive down tariffs and the desire to apply formal regulations and limit the present informality of the mini-grid sector, the parties were also commendably understanding of the root causes of tariff irregularity and aware of diverse nature of ESPs and the variation in generation costs from one location to another. Hence, government parties expressed no desire in following an approach that would lead to the enforcement of uniform tariffs. Alternatively, they are interested in playing a regulatory role to: (1) work towards an inclusive increase in energy access rates through integrating mini-grids in rural electrification plans, (2) manage the provision of subsidies such that tariffs become more affordable to the poor and vulnerable communities, and (3) support ESPs with the shift to renewable sources as a way of driving down the operating costs, hence driving down the tariffs paid by end-users. In Somaliland, the responsibility of these interventions is set as the mandate of ERC, once operational. In Somalia, MoEWR continues to be the main public entity in charge of mini-grids' regulations, with no independent regulatory authority.

In addition to unaffordable tariffs, consumption tracking and tariff collection present another challenge to ESPs and end-users. In major cities, the ESPs charge kWh based tariffs to end-users. However, stakeholders and development partners reported that there is a common use of a two-meters setup, where ESPs provide users with a meter at the time of connecting them to the mini-grid, while end-users purchase and install a second meter to ensure the readings from the ESPs' meter are accurate. In rural areas, metering is less common. Instead, end-users and ESPs agree to a

fixed fee to supply electricity during morning hours, and another for the evening hours. In terms of payment, methods may vary from one location to another, but mobile coverage is reported to be relatively good in all regions of Somalia, and there is heavy reliance on mobile money for electricity bill payment and other purposes. Data on mobile coverage and usage of mobile money applies to urban cities and rural areas alike.

iv. Barriers to achieving universal electricity access through mini-grid development

Previous and ongoing interventions by the authorities and development partners encountered common barriers that ought to be taken into consideration during the design of new interventions. On the demand side, the main barrier facing users is the inability to pay the high tariffs offered by ESPs for electricity. On the supply side, the following figure presents the barriers identified during PPG development as contributing to the government's inability to utilize solar and hybrid mini-grid development as an approach towards driving down tariffs and achieving universal electricity access.

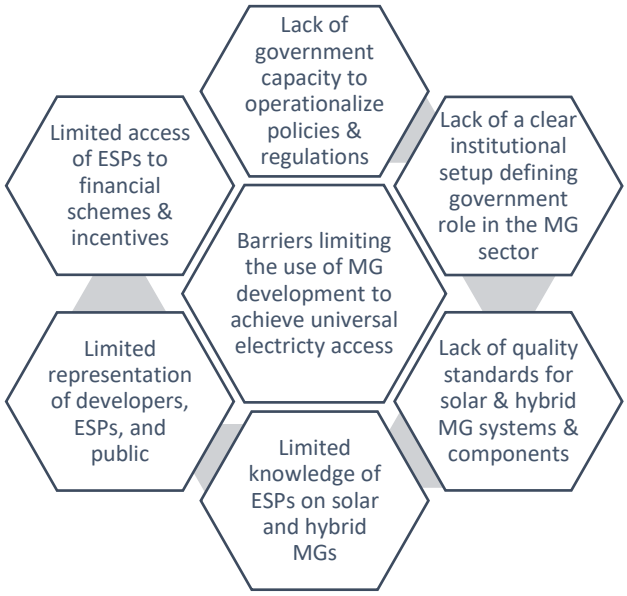


Figure 1: Barriers to achieving universal electricity access through mini-grid development in Somalia

v. Health and socio-economic impacts of the ongoing COVID-19 pandemic on Somalia

In March 2020, the Government imposed restrictions in response to the COVID-19 pandemic, and the UN reduced its physical staff presence in response. It is estimated that these restrictions affected real GDP growth in 2020 (a -11% drop), with reductions in household incomes out of job loss, temporary business closure (43% of MSMEs), remittance decline (estimated at 50%), which will have an impact on nutrition and food security. All these disproportionally affected women, IDPs, and people with disabilities are amongst the poorest. These crises amplify pre-existing vulnerabilities in Somalia, including weak institutional capacities, limited diversification of the economy, low levels of integration in the global economy, high levels of inequalities, exposure to climatic shocks, environmental degradation, and insecurity. During the COVID 19 pandemic, the operating mode shifted to virtual consultations, including meetings, training, and workshops resulting in disruptions, setbacks, and delays. In partnership with the Government of Somalia and UN Agencies, UNDP spearheaded the socio-economic impact assessment of Covid-19 in Somalia. The findings have contributed to the recovery initiatives by the FGS and UNCT with support from the development partners.

In conclusion, there are many challenges facing the structural development of the mini-grid sector in Somalia and consequently limiting the government capacity to undertake rural electrification plans and achieve universal energy access. The business-as-usual scenario constitutes the continuity of country reliance on diesel mini-grid systems developed and operated by ESPs, with the latter lacking the technical and financial ability to shift to renewable resources, the government lacking the tools required to monitor performance and track consumption, hence, regulate the sector, and end-users in rural areas often lacking the ability to pay the high tariffs offered by the ESPs. In the long-term, the status quo is expected to lead to an increase in GHG emissions from the energy sector in Somalia, accompanied with lack of ability to achieve universal energy access for the Somali population.

By participating in the Africa Mini-grid Programme (AMP), the Government aims to overcome these challenges and make light-touch, yet effective, interventions in the mini-grid sector. Thus, the AMP in Somalia project is designed to support the authorities and work on enhancing the capacity of the public sector, but also to work with private sector players, e.g. ESPs, developers, investors, etc., to enhance their capacities and processes to become more efficient. The combination of top-down and bottom-up activities is aspired to achieve the highest possible social returns. Moreover, by increasing the commercial viability of low-carbon minigrids and thus encouraging access to long term, affordable and clean energy, AMP projects are well aligned with government efforts to respond to the pandemic and national priorities for long-term green and equitable recovery. The COVID-19 crisis has highlighted the importance of reliable and affordable access to electricity for enabling essential health service delivery[4], and underpinning the ability of communities to abide by social-distancing measures and overcome the disruption to economic activity[5]. Also, over the medium to long term, access to reliable, affordable, clean energy will be crucial to support economic recovery. Not only are investments in off-grid renewable energy important levers to create jobs and generate financial savings but increasing energy access for the most vulnerable population creates opportunities for local economic development that enhance resilience to shocks and crises. Over the long term, access to reliable, clean energy reduces pressure on ecosystems and may contribute to reducing the likelihood and spread of zoonotic diseases[6].

[4] Access to modern and reliable energy is essential for lighting of health facilities, to enable night-time service provision, power medical devices (e.g. ventilators, which are critical to tackling COVID-19), provide clean water (e.g. pumping and filter), enable remote health applications, facilitate public health education and the dissemination of information, enable cold chains to make vaccines and other medications available, and with refrigeration, allow for blood-banking. It can also be a factor in attracting and retaining skilled health workers and providing faster life-saving emergency response.

[5] Access to modern and reliable energy increases household-level resilience and capacity to overcome shocks and crises (e.g. savings to wait out temporary unemployment or loss of market access) and improves the capacity of remote communities to attend to their core needs, even in the face of movement restrictions, by guaranteeing a reliable source of energy independent of vulnerable supply chains.

[6] Off-grid energy reduces pressure on ecosystems by providing an alternative to fuel wood (electric cooking), by avoiding the need for transmission infrastructure, and by improving food security through cold chains and refrigeration. This can lower the risk of emerging infectious diseases through minimizing wildlife-to-human transmission.

III. STRATEGY

In the previous section, we presented the baseline opportunities and challenges. In this section, we focus on the proposed project design for the AMP in Somalia, discussing the embedded assumptions it entails, the linkages between the project and its regional chapeau programme, and the measures proposed to ensure synchronization with the authorities and development partners to minimize duplication and promote complementarity.

i. Project design and linkage of the AMP Regional Project

The AMP in Somalia follows the AMP's overall Theory of Change (ToC), developed in the Program Framework Document (PFD), which acknowledges that renewable energy mini-grids are currently not competitive with fossil-fuel based alternatives and envisions that once solar PV mini grids are competitive, private capital will flow resulting in various program benefits, inter-alia: investment at scale, GHG emission reductions, higher electrification rates and lower tariffs for end-users. As such, the ToC of the AMP involves a number of logical steps: (1) organize interventions into three key areas (components): policies and regulations; business model innovation and private sector; and innovative finance; (2) create program-specific outputs under each of these three areas that are designed to systematically target the underlying investment risks at the national level for renewable energy mini-grids; and (3) mitigating the underlying investment risks will in turn inverses the earlier relationships, resulting in three key beneficial drivers for the competitiveness and financial viability of renewable energy mini-grids: reduced hardware and soft costs, and increased revenues and economies of scale. Collectively these three beneficial drivers result in a virtuous cycle of lower generation costs. The figure below presents the ToC diagram for the AMP.

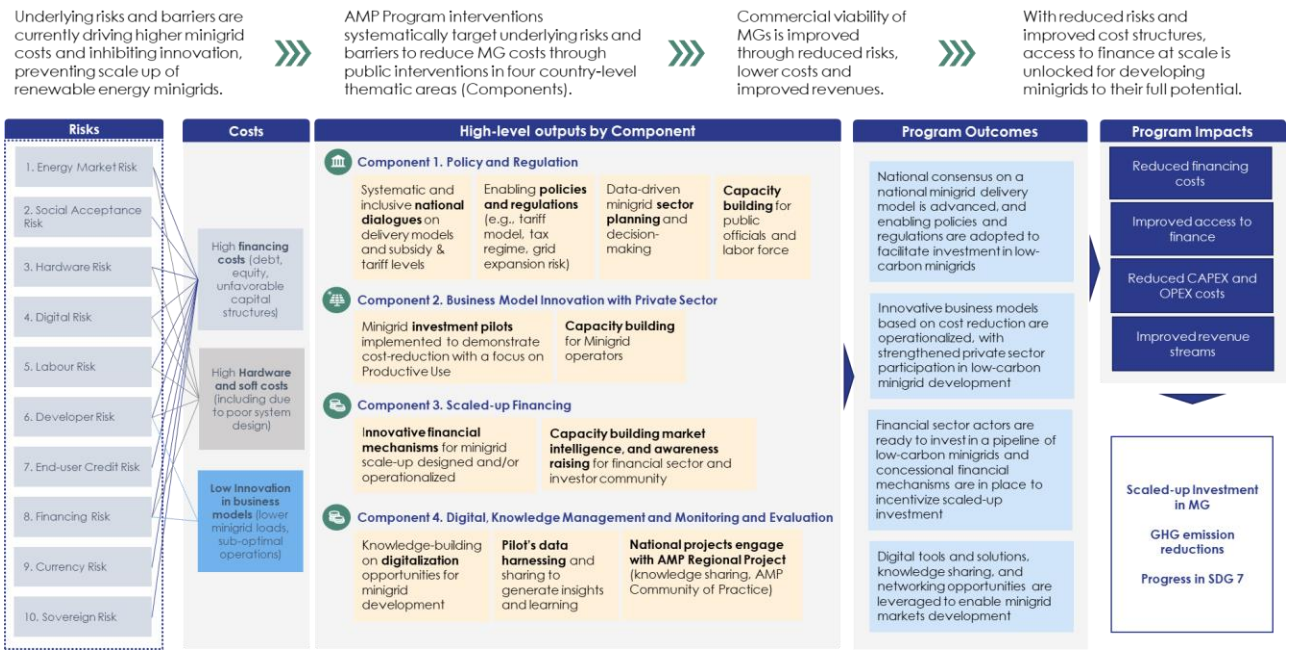


Figure 2: Theory of Change (ToC) diagram of the AMP

The objective of the AMP in Somalia is "Supporting access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low-carbon mini-grids in Somalia, with a focus on cost-reduction levers and innovative business models". Given the domination of ESPs on the mini-grid market in Somalia, the keywords in the objective statement are "clean energy" and "cost-reduction", i.e. the project aims to increase the market competitiveness of "solar PV" mini-grid systems. In this context, "cost reduction" was one of the key themes guiding the strategy of the AMP in Somalia as will be seen in leaning towards hybridization, increasing the funds dedicated to technical capacity building of ESPs to reduce operational losses, and focusing on enhancing tariff collection systems to reduce commercial losses. A complementary area which the strategy focuses on quite heavily, in accordance with the AMP's ToC is the social return of the project, i.e. putting equal emphasis on adopting consumption tracking and transparent billing systems to guarantee that the cost-reduction for ESPs will result in driving down tariffs to end-users.

To address baseline challenges and achieve the overall objective, the project design involves a collaborative strategy revolving around two central ideas: (1) Promoting digital transformation as an essential ingredient for creating an

enabling environment for scaled-up investment in mini-grid hybridization, and (2) Institutionalizing capacity building, stakeholder engagement, and the financial mechanisms targeting the shift from diesel to solar PV in the mini-grid sector. These central ideas have influenced the contextualization of the components, outcomes, and outputs introduced by the AMP in the PFD, such that the AMP in Somalia is aligned with the AMP Regional Project design, yet sensitive to the national context and needs. The following figure captures the four elements shaping the proposed strategy for the AMP in Somalia, and the overarching Knowledge Management (KM) and digitalization targets on the national and regional levels.

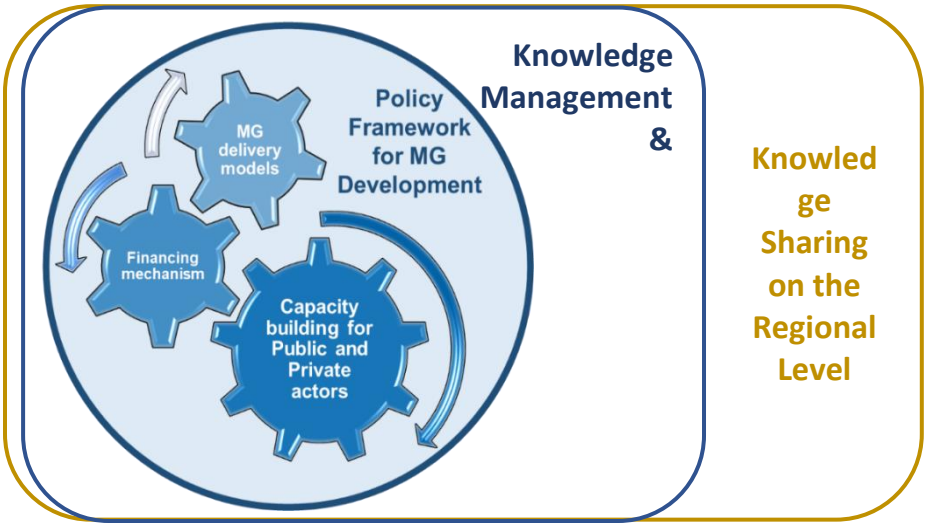


Figure 3: Overview of the proposed design for the AMP in Somalia

The project will align with the AMP Regional Project to foster knowledge sharing, learning, and synthesis of experiences in a multi-directional manner– i.e. flowing from the AMP Regional Project to the Somalia project, and vice versa, and between the Somalia project and other national projects within the Program. The AMP Regional Project will connect countries to knowledge, resources and networks of best practice and will support the rapid deployment of expertise, solutions and tools to support on-the-ground implementation. The main role of the AMP Regional Project is to make best practices in regulations and policies, innovative and inclusive business models, digitalization and financing available to all AMP beneficiary countries.

ii. Support to the public sector: Digital transformation and institutional capacity building

As discussed in the previous section, the authorities have been developing policies and regulations in an attempt to gain relative control on the energy sectoral planning, and therefore, have the ability to utilize mini-grid development to increase clean energy access rates. Taking into consideration the obstacles presented, the level of informality, and a challenging political context, the market development of mini-grids in Somalia is quite remarkable. Hence, the AMP engages with the existing private operator mini-grid delivery model, presenting digital transformation as a non-disruptive intervention that capitalizes on the work done by other stakeholders and development partners to elevate the cost-reduction leverage of ongoing and future interventions.

The digitalization of site selection is already ongoing through the SEAP project, where the team is conducting a geospatial mapping exercise to support the authorities and project developers with having more insight into the market status and the locations with high investment potential. Internationally recognized online tools, such as Odyssey, already exist and are available for purchase or registration. Under the AMP, an online tool will be selected and adopted to support the government to get better visibility on the sector and take steps towards regulating what is currently a largely informal industry. The tool will assist with greenfield site development by layering additional data on existing and updateable geospatial maps. The proposed tool complements SEAP's database by adding data on potential counterparts in each location, baseline capacities and tariffs, the potential for productive uses, as well as other socio-economic details. This "pipeline support" would channel ESPs through the site selection process and be integrated into the process for applying for a license. Existing sites or those newly built under the program will also be monitored using the same online tool. This would offer the developers, investors, and public authorities the chance to obtain near-live data stream for M&E, regulatory oversight, and ongoing GHG mitigation data. The integration of

on-site remote telemetry on generation assets would allow technical performance data to be collected and installing smart meters would provide transparency on tariffs and site economics. In combination, the quality of energy services being delivered will be monitored using standardized indicators such as the ESMAP Tiers of Service.

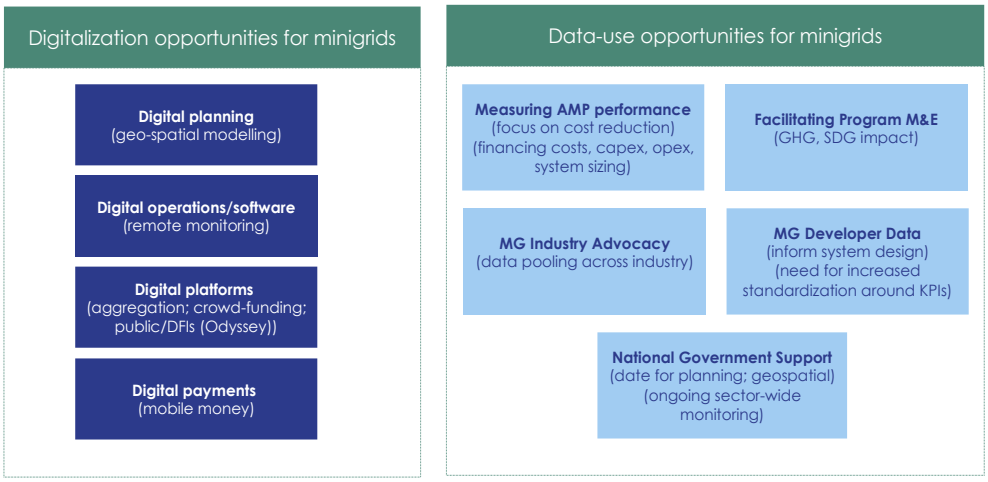
Box 1: Digitalization and Mini-grids

Digital technologies and solutions are fundamental to enabling off-grid electrification. In fact, the emergence of minigrids as a viable solution to electrify remote and isolated communities relies strongly on certain digital technologies such as *remote monitoring* of minigrid operations and the use of *digital money* to collect customers' payments. The Figure below represents an initial categorization of the digital and data opportunities for minigrids under the AMP.

Digital opportunity for minigrids. It's increasingly clear that digital is a key entry point across minigrid market development. The Figure below shows different categories of digital solutions in the minigrid sector: (i) digital planning, (ii) digital operations, (iii) digital aggregation platforms, and (iv) digital payments. In common to all these is the potential of digital technologies – whether used by policy makers, financiers or minigrid developers - to lower minigrid costs, reduce risks, and address barriers to scale.

Data use opportunity for minigrids. Many opportunities around digitalization are related to leveraging the large amount of data generated by minigrid projects to surface actionable insights, learning and optimization to consolidate business models and technical solutions for scaling-up minigrids. For instance, the use of operational performance information from existing systems to forecast demand and design future minigrid can help avoid a very common pitfall of many minigrid systems which are significantly oversized and hence not financially viable.

Figure 4: Digital and data opportunities for minigrids in the AMP



The potential for using data and digital tools and solutions to add value at various stages of the minigrids value chain remains largely untapped. With enhanced capacity, **minigrid developers** could streamline their operations though smart metering and remote control of their assets and potentially reduce operations and maintenance costs by about 15% to 30%(*) through reduced site visits, labor and component replacement costs. **Government stakeholders** could leverage digital solutions for energy sector planning, to streamline licensing, monitor quality of service and broadly improve sector oversight. However, data of sufficient quality is not always available for these purposes, and government stakeholders often lack the necessary technical capacity. And while data could be a tremendously valuable asset in the minigrid sector, this potential that remains largely underutilized due to the lack of standardization and common data reporting protocols and the fact that this sector is still very nascent and remains relatively fragmented.

Opportunities across the Program, and with the AMP regional project. The AMP provides a unique opportunity to develop a single set of metrics and guidelines for data collection, and use them to collect data from minigrid investment pilots across different national projects which the AMP Regional Project can then aggregate, derive insights from, and systematically disseminate knowledge with participating AMP countries and with the broader minigrids sector in Africa. At the same time, the link between the regional project and the total of eighteen (18) national child projects provides a unique 'distribution channel' opportunity across Africa for AMP to mainstream the use of digital tools and solutions for minigrids cost-reduction and scale-up.

(*) AMMP Technologies. "Reducing the cost of operations and maintenance for remote off-grid energy systems." September 2018.

The text box above demonstrates how the AMP integrates digitalization as one of the drivers of mini-grid market development, where digital platforms can be used for performance monitoring as well as for tendering, noting that there may be opportunities for procurement of the digital platform to be coordinated with the AMP Regional Project

given that both the AMP in Somalia and the AMP Regional Project are following a Direct Implementation Modality (DIM).

The proposed digitalization measures do not have to be a legal requirement on the first day of their adoption, especially since the public authorities have limited capacity for law enforcement and that their adoption is already in the best interest of ESPs and end-users. Effort towards encouragement and incentives is deemed more suitable for the Somali mini-grid market than immediate enforcement. Therefore, the AMP will focus on enhancing the institutional setup in two ways. The first constitutes creating linkages between different government bodies, refining the role of each in the mini-grid sector, and investing in the institutional capacity building of the public officials working in the relevant entities. The second involves the participation in the Communities of Practice (CoPs), led by the AMP Regional Project, which will allow for regional-level cooperation and knowledge sharing. In time, this will strengthen the ability of public parties to respond to the changes in the market and follow the lead of countries with comparable features. Furthermore, these institutional capacity building activities will involve promoting the benefits of database keeping, performance monitoring, and consumption tracking to ESPs and end-users as an alternative to focusing on developing new regulations or relying on government capacity for law enforcement. For example, becoming a licensed ESP could be part of the eligibility criteria required to apply for finance from existing and future financing schemes. Other indirect incentives can be achieved through potential collaboration between the AMP in Somalia and other local initiatives. These can target end-users who could potentially apply social pressure on ESPs for the latter to obtain the license, i.e. the authorities could partner with one of the projects promoting the use of energy-efficient light bulbs to start a campaign where the appliances can be purchased at a discounted price for end-users connected to a licensed ESP. Similarly, the installation of measurement equipment and smart meters does not have to be introduced to the Somali market as a mandate, formalized by regulations with penalties for non-compliance. Instead, a step-wise approach to market regulation can be adopted, where positive promotion and subsidization strategies could be put in place to encourage the voluntary shift to digital models. Examples include engaging donor agencies that offer green certificates for GHG reductions encouraging ESPs to not only shift to solar and hybrid mini-grids, but also to monitor their diesel consumption and total generation before and after the shift. Other examples include collaborating with development partners with funds dedicated to promoting smart metering, and providing financial and non-financial incentives through periodical publications on the performance of ESPs in the different regions, extending the competition presently existing in major cities and focused primarily on tariff levels, to be on the national level and focusing on tariff levels, GHG emissions, consumer satisfaction, and overall efficiency. Once reporting is the normal practice for ESPs, introducing regulations is expected to be easier and more effective.

The AMP also includes a component that focuses on innovative financing and the development of financial sector capacity. As above, the goal is to build upon previous and ongoing initiatives by development partners, yet, the AMP will emphasize the support to facilitating finance from the diaspora and small investors as a potentially more sustainable source of finance than donor funds and development loans.

iii. Support to the private sector: Industry associations and mini-grid education

During PPG consultations, discussions around the role of private actors in developing new regulations for mini-grid development were initiated. This is generally important as part of stakeholders' engagement activities, but in Somalia, the importance is magnified by the high control of private investors and operators on the mini-grid sector. Hence, one of the aspired outputs of the AMP is to support private actors with self-organization through establishing and capacitating mini-grid industry associations in Somalia and Somaliland. The PPG consultations also explored the limited awareness on the importance of purchasing quality products and how to identify them. Most of the currently available solar and hybrid mini-grid products are of poor-quality, which undermines consumer confidence in this technology and poses a financial strain on consumers who scarcely invest funds in products that fail to perform as promised.

Another issue that was extensively discussed during PPG consultations is the technical capacity of ESPs to design, operate, maintain and manage solar and hybrid mini-grids. This was identified as one of the most critical gaps facing mini-grid development in Somalia and Somaliland. The problem was explained to be multi-layered, comprising several technical and social challenges. Therefore, the project design expanded the scope of capacity building activities to include the establishment of a one-year academic certification/diploma, consisting of general courses for three months, followed by the choice of one of three tracks:

a) Mini-grid Design: for individuals with engineering background interested in studying the technical aspects of system design, performance monitoring, remote telemetry, and solar components' quality standards;
b) Mini-grid O&M: for operators and technicians interested in vocational training on the installation, operation, and maintenance of hybrid mini-grid systems; and

c) Mini-grid Management: for individuals interested in studying tendering, contracting, procurement, proposal design, tariff structures, demand simulation, productive use support, revenue diversification, and project management.

The institutionalization of capacity building and knowledge production in the solar and hybrid mini-grid sector is not only crucial for the AMP to attempt to fill this identified gap sustainably, but is also key to ensuring that ESPs are ready to digest the proposed medium and long-term digital transformation concepts and applications. Therefore, in each track, relevant courses on digitalization will be included. Moreover, the academic programme will be developed and operated in close collaboration with the Communities of Practice (CoPs), led by the AMP Regional Project, such that the programme makes best use of the mini-grid courses to be made available through online platforms and other knowledge production and sharing tools. The collaboration will support the AMP in Somalia team to take into account the lessons learned from developing and running similar programmes in countries with relevant context, including technical expertise, but also in terms of ensuring sustainability and inclusivity.

In the design of the proposed programmes, the responsible institution can be one of the national educational institutions in Somalia, but it could also be the mini-grid industry association, with the training and certification designed as one of the services offered by the industry associations. The decision on the most suitable party to be responsible for programme delivery will be made as part of the broader work on supporting the institutional setup for the mini-grid sector. Moreover, for the design to be responsive to COVID risks, while the programme will have practical components requiring in-person attendance, it can also have a partially online component to facilitate the participation of eligible candidates from different regions of Somalia and Somaliland. The online component would also allow for some classes to be conducted by experienced professors from different internationally-recognized universities, as well as engage with the courses and resources to be provided online through the CoPs by sharing material and utilizing the material shared by other AMP participant countries.

iv. Pilot(s) design: Hybridization and approach to site selection

When discussing the most appropriate design of the AMP pilot project(s) with stakeholders and mini-grid experts, the majority reflected on the widespread use of diesel generators in mini-grids and the lack of greenfield locations, indicating that much investment by ESPs has already been put in these systems. Hence, their recommendation was for the AMP to focus on the promotion of hybridization as a better strategy than introducing new 100% renewable mini-grids, with the following list of identified benefits from hybridization:

1) Utilize existing infrastructure for energy generation and distribution;
2) Avoid causing disturbance to the economic supply chain for suppliers, ESPs, and O&M technicians;
3) Reduce the disruption which a complete shift to solar will cause and the risks associated with a loss of power (as a result of teething problems arising from the installation of an entirely new generation infrastructure);
4) The Levelized Cost of Energy (LCOE) when adding solar (with or without batteries) to an existing fuel-based mini-grid will be much lower than the LCOE when replacing an existing generator with batteries, assuming all existing energy needs will be met - which need to be the case to avoid an irate community;
5) The lower investment required per site will also mean that more sites can be hybridized and therefore more GHG mitigation results realized using the AMP budget;
6) Avoid the risks of alienating the community and incumbent entrepreneurs and the potential categorization of the AMP project as a competitor rather than an ally to ESPs; and
7) Support the ESPs who are keen on hybridizing their mini-grids, and willing to invest in hybridization, but lack the capacity to operate and maintain new technologies and purchase unfamiliar components.

Therefore, the AMP intends to invest in hybridizing existing diesel mini-grids using the incumbent generators as a replacement for the need to invest in large batteries for over-night storage. This approach helps to capitalize on the pre-made investment in diesel generators by ESPs and limits the immediate investment in batteries to small battery banks – to serve as backup for short-term solar supply interruptions and supply smoothing. Nevertheless, the project design and finance agreement will include a strategy for phasing out diesel at the end of the generators' lifetime.

For the pilot(s) to be a demonstration of other activities undertaken as part of the AMP in Somalia project, the supply of solar PV components will be preceded by the supply of sensors for ESPs to measure their diesel consumption and monitor their electricity generation before implementing the hybridization process. Sample end-users connected to the pilot mini-grid(s) will be supplied with smart meters for consumption tracking. Following the installation and commissioning of the solar components, performance monitoring and consumption tracking activities will continue, creating a comparative dataset for in-depth analysis and further study.

As for the pilot location(s), and as part of the AMP's plan to build upon previous and ongoing projects by other partners, the AMP studied combining two approaches to site selection. The first approach is to build upon the evaluations conducted by the ESRES team for the applicants who submitted bids under SREF Window 1. One example is the Hargeisa Water Agency (HWA) mini-grid project, for which the technical design drawings and detailed budget has been prepared. The second approach is to build upon the results of the geospatial mapping exercise presently being finalized by the WB team under the SEAP project. The result of the mapping, complemented by the DREI techno-economic analyses to be performed by the AMP, will provide a more comprehensive inventorying of the current mini-grid situation in Somalia, better identification of potential future sites, and better estimation of future demand. During the site selection process, the project team will combine the findings from both approaches, along with other Social and Environmental Safeguards (SES) assessments, to decide on the most suitable location(s) for the AMP pilot project(s).

v. Pilot(s) implementation: Funding, system capacity, and GHG emission mitigation

The GEF funds allocated for implementing demonstration projects under the AMP in Somalia is USD 1,595,096. The exact financing mechanism and payment/contractual modality to be used by the UNDP for the release of the GEF investment fund to ESPs and suppliers will be decided based on the outcome of the DREI techno-economic analyses to be performed at project start. However, the PPG team recommends the adoption of the SREF's Window-1 structure:

- A minimum of 30% co-finance is required from ESPs participating in the AMP pilot(s). The percentage applies to costs associated with hybridization of their diesel mini-grids as well as those associating the digital transformation, i.e. sensors, smart meters, etc.
- A maximum of 20% of the GEF investment fund is directed towards distribution system improvements, adding to it the costs associated with the establishment of new connections which may be required given the system's increased capacity or other retrofitting activities leading to the ESPs ability to generate more electricity than the baseline levels for their diesel mini-grid.

Using the GEF investment, the project is expected to implement pilot project(s) with a total solar PV capacity of 2.116 MW and battery storage capacity of 3.3 MWh, resulting in direct GHG emissions mitigation of about 29,577 tCO_2eq. During the 20 years following project closure, the project is expected to result in 594,000 tCO_2eq of indirect GHG emissions mitigation. [7] The detailed calculation and description of the methodology is presented in Annex 12.

[7] In line with the protocol established in the AMP Program PFD, 10% of the consequential/indirect GHG impacts calculated for this project are allocated to the regional child project core results indicator, in line with the apportioning of the overall program budget. This reflects the benefits of this and all other national child projects accessing the regional child project's support.

IV. RESULTS AND PARTNERSHIPS

i. Expected results

As discussed, Somalia is one of the countries which has no infrastructure for grid electricity and the baseline is characterized by the dominance of private-owned diesel mini-grids and remarkably high tariffs. The objective of the AMP in Somalia is to "support access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low-carbon mini-grids in Somalia, with a focus on cost-reduction levers and innovative business models". The project strategy corresponds to the unique nature of the energy sector in Somalia, and the AMP's concentration on clean energy, by focusing on digital transformation and institutionalization of ongoing initiatives to expand the adoption of solar PV technologies, and promote hybridization as a financially viable path to driving down tariffs and reducing GHG emissions. This is achieved through supporting the Government on the national and sub-national levels with: (1) a national dialogue to identify minigrid delivery models, operationalizing existing mini-grid policies and regulations, including performing techno-economic analyses, designing tools for tariff calculation, and supporting the institutional capacity building of the mini-grid public sector; (2) implementing pilot project(s) to showcase the benefits of hybridization and remote telemetry of performance monitoring and consumption tracking, as well as establishing and capacitating mini-grid industry associations to encourage and strengthen private operators and developers, and introducing academic programs to build private sector capacity to design, operate, maintain and manage solar and hybrid mini-grids; (3) assessing previous and ongoing financing schemes to develop operational guidance and offer training support to stakeholders in the domestic financial sector; and (4) running an effective Monitoring and Evaluation (M&E), Quality Assurance (QA) and Knowledge Management (KM) systems to oversee and guide project implementation.

This section presents the components, outcomes, and outputs comprising the project's strategy and expected results. It also includes proposed activities to help guide the project team during implementation. These activities are subject to change based on future developments on the national or sectoral levels, noting that all consultation meetings, capacity building workshops, and public campaigns shall be used as opportunities to promote diversity and gender balance, notwithstanding balanced representation of relevant stakeholders. Similarly, all surveys, market research activities, gap analyses, technical studies, and SES assessments shall use gender-disaggregated data gathering methodologies and present their findings disaggregated by age and gender.

Box 2: Linkages to the AMP Regional Project –Access to technical and operational support

As part of the AMP network, the project will have access to (if requested) a variety of dedicated technical and operational support from the AMP regional project as follows:

1) **Access to specialized expert international consultants in selected areas** (DREI, data, GIS modeling, mini-grid business models, etc.) hired, retained, contracted and paid for by the AMP regional project and made available to all participating national project staff and selected beneficiaries on as needed basis. The areas of support, listing of available firms/individual consultants under contract by the regional project and protocol for how the project can request and/or access such expertise (if needed/requested) will be elaborated in the first year of regional project implementation and disseminated to this project and the staff of all other participating AMP national projects. This support may range from virtual assistance to in-country missions. All requests for such assistance must be approved by the project manager of the AMP regional project management unit.
2) **Provision of a database of qualified international consultants and firms** disaggregated by their expertise in the four main components of this national project and other key operational areas (procurement, M&E, communications, etc.). These individuals will not be retained or contracted under the regional project but rather provided to the project for informational purposes only in an effort to assist in identifying high-quality experts and firms who may be available for contracting by national governments under their own procurement rules and modalities.
3) **Provision of generic terms of reference (ToR) for various standard activities** (mentioned above) under the four main components of the national project.
4) **Advisory support by the AMP regional project management unit** to staff of the project on trouble shooting (operational support, ToR reviews and problem solving) on an ad-hoc and as-needed basis. These services will be paid for the regional project and available on a first-come/first-serve bases under a protocol to be established by the regional project.
5) **Specialized advisory support for implementing UNDP's minigrid DREI analyses.** During project implementation, the UNDP DREI Core team, working with the regional project, will make available to national teams and consultants the resources and tools to conduct full quantitative DREI applications, and will provide ongoing support and quality assurance.

A full detailed elaboration of these offerings and the protocols attached to each service will be communicated to the project at the inception workshop of the regional project and at the inception workshop of each national project.

Component 1. Policy and regulation

This component aims to ensure that the policy and regulatory environment in Somalia is enabling and supportive of the shift to solar and hybrid mini-grids for electricity generation. It starts with an exercise to build ownership and consensus around one or more national minigrid delivery models (See Box 3), conducting DREI techno-economic analyses to propose suitable tariff structures and financial de-risking instruments, then moves to supporting digital transformation to online tools and platforms for performance monitoring, consumption tracking, and tariff calculation, as ways of facilitating the operationalization of existing policies and regulations of relevance to clean energy and mini-grid sector development. In addition, it tackles two ingredients that are crucial for the longevity of the proposed tools and instruments. The first is the need for improved institutional setup to enhance the potential for positive government-led interventions in the mini-grid sector. The second is the need for quality standards for system components to enhance the efficiency of solar and hybrid mini-grid operation.

Outcome 1: Stakeholder ownership in a national mini-grid delivery model is advanced, and appropriate policies and regulations are adopted to facilitate investment in low-carbon mini-grids

Output 1.1. An inclusive national dialogue to identify mini-grid delivery models is facilitated, clarifying priority interventions for an integrated approach to off-grid electrification.

Activity 1.1.1. Support the establishment of a working group or a similar platform that includes all relevant stakeholders from Government, local authorities, civil society, local media, private sector, rural populations, and others, and initiate a national dialogue to identify the optimal mini-grid delivery model, defining key issues regarding who finances, builds, owns and who operates and maintains the mini-grids.

Activity 1.1.2. Provide input to the discussion in the form of gap analysis, best practice reports, and suggestions for delivery models and make sure that the probable consequences of any decision taken for the overarching framework are evaluated and well understood.

Activity 1.1.3. Align the ongoing dialogue with activities implemented in parallel under the other outputs and loop respective (pre-)results back into the discussion.

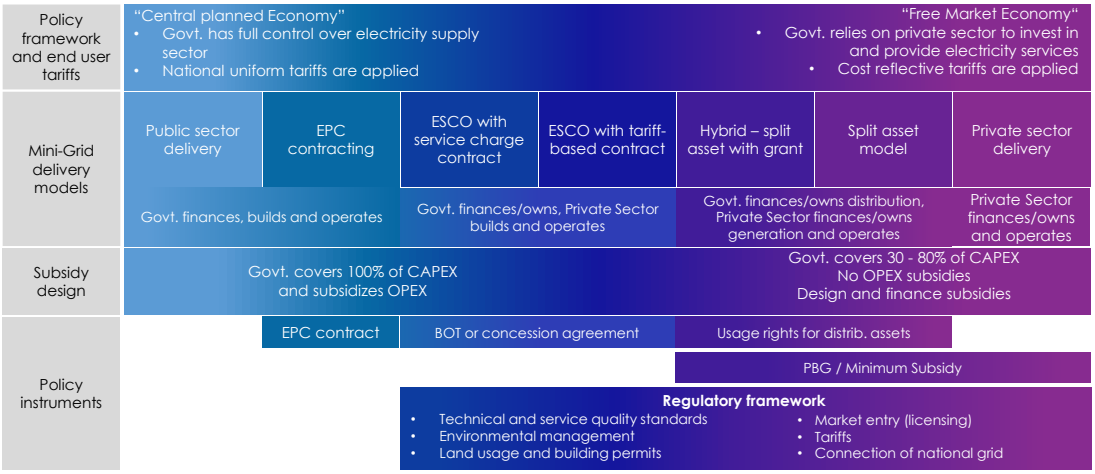
BOX 3. The Concept of a Minigrid Delivery Model

The concept of a minigrid 'delivery model' is a key concept for this project. This text box seeks to set out a common understanding of the concept and its importance to the project.

Definition: *A minigrid delivery model, determined by the national government, is the cornerstone of a country's over-arching minigrid regulatory framework. It defines who finances, builds, owns and who operates and maintains the minigrids. Where applicable, it seeks to engage the private sector. A minigrid delivery model is closely associated to other key components of a minigrid framework, including tariff structures/mechanisms and subsidy levels/mechanisms.*

In each country, identifying one (or more) delivery models will provide a framework for all sector stakeholders to plan for the longer term, particularly with regard to mobilizing private investment as one of the main objectives of the project. FigureThe figure elow describes the spectrum of design options for delivery models, across a number of different elements (ownership, policies, finance etc.)

Figure. Conceptual outline of minigrid delivery models



Source: JAKOB SCHMIDT-REINDAHL, Mini-grids Policy Expert, INENSUS

This decision-making process around identifying a delivery model is complex and should ideally be done in the form of a national dialogue involving all relevant stakeholders to varying degrees (different ministries such as energy, finance, health and environment, local authorities, the public, the media, the beneficiary communities, utilities, the private sector, and other key stakeholders) in order to build a national consensus on the basis of which large-scale deployment of mini-grids can be accelerated and have a sustainable impact.

Pilot projects planned under this project will also seek to fit into this framework. The more clarity there is on the part of the government regarding the choice of delivery model, the easier it is to develop or plan business models which can reduce minigrid costs. A clearly identified delivery model minimizes the risk of investments being made based on assumptions that are not in line with government expectations and may lead to conflicts and economic losses down the line. It also helps the government to answer the important questions related to the rural electrification sector to provide clarity for private investors and operators and build confidence.

Output 1.2. Mini-grid DREI techno-economic analyses carried out to propose most cost-effective basket of policy and financial de-risking instruments and contribute to AMP Flagship Report on cost reduction.

Activity 1.2.1. *Initial, full quantitative national DREI analysis (Year 1).* A full quantitative DREI application will be conducted in the first year of project implementation. The PMU will assemble a task team to perform the national DREI analysis including consultants (international, national), government stakeholders, and members of PMU. Deliverables will include interviews, completed financial models, and national reports/knowledge products. Initial TORs for these consultants are annexed to the project document (ProDoc). This national analysis will be funded by the national project. The AMP Regional Project can in turn provide various support on DREI to the national project: including finalizing TORs for the country-level, recommendations (in the form of a vetted roster of consultants) on international consultants that are trained on DREI already, as well as resources and tools (Excel models etc.) to conduct the DREI analysis. Results from the full quantitative national DREI analysis will be shared with the regional project to feed into a regional flagship AMP

knowledge product, across all AMP countries, on DREI and lowering mini-grid costs. This regional AMP knowledge product will be funded by the regional project.

Activity 1.2.2. *Dissemination of DREI analyses and adaptive management (Year 2).* In the first half of Year 2, the project will disseminate the national DREI analysis and, in the second half of Year 2, the flagship DREI regional knowledge product (south-south learning) through dissemination activities at the national level. Together, these dissemination activities will encompass 3 or 4 round-table workshops with government, private sector and other key stakeholders, over a 12-month period. Along-side these dissemination activities, the PMU will utilize the findings of the national DREI analysis to inform any adaptive management of the national project's outputs/activities, to address identified needs for public measures arising from the national DREI analysis. These activities will be funded by the national project.

Activity 1.2.3. Propose suitable tariff structures that are in-line with regional efforts and builds upon the recommendations of similar projects in Africa and the shared knowledge through the CoPs, taking into account the country-specific context, especially in relation to the diverse nature of ESPs and the variation in operating costs from one location to another. Develop a simple calculation sheet to support the estimation of minimum tariff levels during the design phase for solar and hybrid mini-grids, in accordance with the findings of the analyses.

Activity 1.2.4. *Coordination with regional project on national DREI analysis update (Year 4).* In the final year, or year 4, of the national project's implementation period, whichever happens first, the original national-level DREI analyses will be refreshed to track evolutions in financing costs as well as in hardware and soft costs. For administrative efficiency, the regional project will fund and execute this update (a 'light quantitative DREI analysis'), on behalf of the national project. The deliverable will be a brief note of 2-5 pages on the DREI national update. The data from the national refreshed DREI analysis will be fed into an update note to the year 2 flagship regional DREI knowledge product, which will provide an end-of-program overview of the evolution in mini-grid costs across AMP countries. The national project's contribution to this activity will be: facilitating the DREI national update (to be executed by the regional project); disseminating the findings of the national DREI update note, and the update to the regional flagship DREI product.

Output 1.3. Mini-grid policies and regulations, including tariff model and incentives, are operationalized through digital transformation support, in collaboration with the authorities and other development partners.

Activity 1.3.1. Review the existing sectoral policies and mini-grid regulations to identify the stranded documents, i.e. regulations awaiting approval or have been approved but not operationalized.

Activity 1.3.2. Support the authorities to promote the use of measurement equipment and sensors for performance monitoring of existing and new mini-grids. This includes building the technical capacity of the government on the use of remote telemetry applications, and raising awareness on the availability of remote monitoring hardware, smart meters, and software packages that unlock access to near real-time data and allow sites to report accurately on impact indicators. Among the available tools are Ferntech's Universal Monitoring and Control technology[8], New Sun Road's data-driven technology solutions[9], and AMMP's digital solutions for energy service companies in emerging markets.[10]

Activity 1.3.3. Support the authorities to promote the use of smart meters for consumption and tariff monitoring. This includes the facilitation of establishing contacts between local suppliers and international manufacturers of sensors and meters.

Activity 1.3.4. Review, select and adopt relevant online tools and/or register at one of the internationally recognized digitalized data platforms, to provide the authorities in Somalia and Somaliland visibility on their mini-grid sectors, i.e. location of mini-grid systems, their type, capacity, and the tariffs charged by ESPs. The platform will include an online tool for license application management (to be used by ESPs). The platform would be hosted by the regulatory bodies in Somalia and Somaliland, or at the most relevant ministry until a regulatory body is established (supported under Output 1.3).

[8] Ferntech technology for Monitoring and Control of Off-grid Power Systems - https://ferntech.io/
[9] New Sun Road - https://www.newsunroad.com/
[10] AMMP - https://www.ammp.io/

Activity 1.3.5. Support the authorities in the preparation and conduction of public consultations and awareness-raising campaigns to advocate the benefits of performance monitoring on increasing efficiency and reducing operating costs among ESPs and end-users. Examples of monitoring and reporting frameworks include the NREL inspired Quality Assurance Framework developed for the Sustainable Energy Fund for Africa (SEFA) and the African Development Bank (AfDB).[11]

Activity 1.3.6. Develop user manuals for the new tools and platforms adopted in the local language, and conduct extensive training workshops to a technical support team consisting of at least 6 persons in each of the Somali federal regions and Somaliland.

Output 1.4. Institutional setup for rural electrification assessed and supported, and institutional capacity building provided on technical, managerial, and regulatory issue.

Activity 1.4.1. Analyze the existing institutional setup for rural electrification, including performing needs assessment to the key public parties involved in the energy sector. Present the summary of findings in an inception report for the government's review and comments.

Activity 1.4.2. Conduct workshops and in-house consultations with ministries and authorities on the benefits and limitations of the existing institutional setups, discussing their proposals for improving the intra-government collaboration and work-flow.

Activity 1.4.3. Develop process flow charts, organizational structures, and data flow diagrams and present in a final report summarizing the outcomes of the workshops and in-house consultation, and the recommendations for improving the institutional setup in Somalia and Somaliland.

Activity 1.4.4. Support the ministries and authorities with the implementation of the recommendations.

Output 1.5. Quality standards for solar and hybrid mini-grid components domesticated, and institutional capacity of Somali Bureau of Standards (SBS) and Somaliland Quality Control Commission (SQCC) strengthened.

Activity 1.5.1. Review existing domestic standards and identify the gaps requiring the introduction of new codes and standards. Prepare a report and present the results to SBS and SQCC.

Activity 1.5.2. Develop new standards to fill the gaps based on existing international standards in coordination with SBS and SQCC and regular consultations on aspects of domestication.

Activity 1.5.3. Integrate the data collection processes required for quality control and assurance in the digital transformation activities and online tools adopted under Output 1.2.

Activity 1.5.4. Develop user manuals and guidance notes in local language and assist the authorities with the design of checklists and inspection plans, including field audits, market surveys, third-party verification processes and reporting procedures.

Activity 1.5.5. Conduct capacity building activities to introduce the new standards and the corresponding audit and testing procedure to relevant staff members at SBS, SQCC, and customs authorities in Somalia and Somaliland.

Component 2. Business Model innovation with private sector engagement

This component focuses on innovative ways for increasing private sector engagement in the shift from diesel mini-grids to solar and hybrid mini-grids. The work with developers and ESPs will come in three ways: demonstration, capacity building, and representation. For demonstration purposes, pilot project(s) will be implemented to showcase the benefits of hybridization and digital transformation. For capacity building, the AMP in Somalia plans to institutionalize knowledge production in the mini-grid sector by establishing a one-year academic programme dedicated to solar and hybrid mini-grid education. As for representation, the project will support the establishment and capacitation of industry associations for mini-grid developers and ESPs to ensure knowledge sharing among private sector actors and continuous engagement with the authorities in decision-making processes.

Outcome 2: Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini-grid development

Output 2.1. Pilot(s) developed using innovative business models through calls for proposals based on lessons learned from the operationalization of the SREF under ESRES2 and the results of the geospatial mapping under SEAP.

[11] Quality Assurance Framework for Mini-grids in Nigeria - https://www.tfe.energy/project/Quality-Assurance-for-Mini-Grids/

Activity 2.1.1. Initiate the site selection process by reviewing the results of the geospatial mapping conducted by SEAP and the project design documents for shortlisted ESPs under SREF Window 1.

Activity 2.1.2. Conduct detailed site assessments for the proposed location(s) for the pilot project(s), including needs assessment, demand sizing, and the applicable SES assessments in accordance with the project's ESMF, to confirm the capacity and type of the mini-grid system(s).

Activity 2.1.3. *Develop a detailed project plan (the project's 'Minigrid Pilot Plan') for advancing the project's minigrid pilot(s)*

The PMU will lead and develop, in close collaboration with other stakeholders and support from the AMP Regional Project, a detailed project plan (the project's 'Minigrid Pilot Plan') for advancing the pilot(s). The project's Minigrid Pilot Plan will be shared for clearance, and clearance received respectively by UNDP and the Project Board, by the end of Year 1.

The project's Minigrid Plan Pilot Plan will determine, among other aspects, the following:

- Clear objective for the pilot(s)
- The minigrid delivery model(s) which will be demonstrated in the pilot(s)
- The proposed type of pilot(s), anticipated here to be (i) hybridization of existing diesel minigrids. It may also include: (ii) greenfield pilots, including productive use and (iii) productive use overlays, on existing pilots.
- The estimated target number of pilot(s), based on ex-ante estimates of available GEF INV
- Inputs, as necessary, on site selection, including based on geo-spatial mapping, for the pilot(s)
- Site-specific assessments and other requirements (e.g., demand sizing, social and environmental safeguards (SES) assessments, gender assessments, e-waste disposal). Some assessments may be needed to be performed by the project ex-ante, to inform follow-up competitive tenders
- The use of the digital platform for
    - Competitive tendering, as necessary.
    - Ongoing data collection from mini-grid pilot(s), including data-sharing requirements from mini-grid pilot(s) (Box 5), as well as digital hardware requirements (Box 4)
- The project's approach to ensure minimal concessionality for the level of GEF INV support to the pilot(s) (when there are private sector beneficiaries)
- Review of the IP's modalities for transfer of GEF INV support to the pilot(s), ensuring they are aligned with UNDP's policies and financial rules.
- If a pilot includes GEF INV support for productive use, ensuring the pilot takes a third party ownership model to productive use equipment
- Brief summary updates, at the time of drafting the plan, on the status in Somalia of
    - (i) any other solar-battery minigrid pilots (specifications, any results/findings to date), and
    - (ii) examples of minigrid productive use applications (specifications, any results/findings to date).

Box 4: Initial Indicative Specifications for Minigrid Digital Hardware and Software

Table 1 Indicative minimum requirements and costs references for hardware/software for data-sharing

Offering	Details
Hardware requirements per site	• Inverter monitoring (monitoring & control) • Distribution monitoring • Optional current transformers for energy meter if more than 10 kW (single phase) or 30 kW (three-phase) • 24V power supply (50€) • Various data cables and installation material • Optional: 24V backup battery (50€) • Optional: Cabinet for the complete monitoring system • Industrial internet router • Industrial or high quality Ethernet Switches
Hardware requirements per connection	• Smart meter

Box 5: Data sharing requirements for mini-grids

Pilot beneficiaries (e.g. minigrid operators) receiving support from the project will be required to share minigrid performance data with the national project

Specific terms and conditions for data-sharing and how best to operationalize the commitment and its adoption by the beneficiaries will be defined and agreed upon with minigrid operators during project implementation, including details of what data can and cannot be used, based on consultations with industry stakeholders and with support from the AMP Regional Project.

The specifications around the data generation by the demonstration pilots supported by the project will consult and follow guidance/standards provided by the AMP Regional Project. A standardized Quality Assurance and Monitoring Framework (QAMF) for application in all minigrid pilots supported under the project will be developed in year 1 of the regional project and disseminated to all national projects.

A digital platform will be procured by the project (under Component 4, Output 4.2) to serve different purposes including: (1) running digital tenders by which minigrid developers will be selected as beneficiaries to receive support under the project and (2) managing all technical and financial data related to minigrid sites.

Through the implementation of this digital management platform, minigrid developers selected to implement minigrid pilots with support from the project will have access to a set of best-in-industry tools for analyzing minigrids (e.g. demand forecasting, system optimization, distribution network design, detailed financial modeling at the site and portfolio level). Similarly, as part of the roll-out of the data platform, minigrid developers (as well as key government and other stakeholders) will receive capacity-building and in-depth training to use analytical tools and data management technologies.

Box 5b: Pilots and the Project's Environmental Safeguards Management Framework (ESMF)

Pilot minigrids funded by GEF INV are required to comply with all the relevant national standards of the country as well as UNDP standards on social and environmental safeguards, gender equity and stakeholder consultation. In support of this, an Environmental Safeguards Management Framework (ESMF), developed for the program, a gender action plan and stakeholder engagement plan accompany this ProDoc. The ESMF is structured as a program-wide framework that provides guidance that is both generically applicable to all AMP country projects as well as country specific. This guidance will have to be incorporated and considered in developing the environmental and social impact assessments and management plans for pilot minigrids.

A critical consideration under this ESMF is the need to ensure environmentally sound management of replaced equipment, including batteries, inverters and solar panels, after their usage. The responsible handling of waste with recycling of batteries and other recyclable equipment, should be clearly documented, budgeted and monitored in compliance with national and UNDP safeguards requirements.

Activity 2.1.4 *Design of tender process for pilot(s) using a digital platform.*

The project's pilot(s) may involve private sector engagement in various forms, including models involving private sector minigrid ownership, private sector EPC, and private sector O&M services. Where there is private sector engagement in the pilot(s), a competitive tender process will be executed using the digital tendering feature of the digital platform procured under Component 4. The digital platform will have, at a minimum, the following features:

- Complete end-to-end management of e-tenders for mini-grids customized to specific project needs
- Complete data management for financial schemes, including customized technology solutions for claims submissions and independent verification
- Remote verification of connections through smart meter integrations
- Automated M&E analytics for all project/program indicators (connections deployed, amounts paid, gender/environmental impact metrics, etc.

Under this activity, the PMU, working with the digital platform vendor, specialist engineering, financial, procurement, and legal expertise, and the AMP regional project, will translate the approach set out in the project's Minigrid Pilot Plan into the design of a customized tendering process on the digital platform, including requirements, specifications and evaluation criteria. At the end of this activity, the tendering process on the digital platform will be ready to launch. The tender process itself should be launched before the end of Year 2.

This activity may also include capacity building for government personnel with the digital platform, as well as planning for capacity building to be available to private sector developers who will participate in the tender.

Activity 2.1.5 *Execution of tender, contracting and payments to the selected pilot beneficiaries*

In year 2, the tender will be launched and executed according to the design finalized in activity 2.1.2, resulting in pilot beneficiaries being selected. Submissions to the tender will be competitively assessed against evaluation criteria (engineering, financial), with the PMU supported by appropriate expertise.

Following selection of beneficiaries, the PMU/IP will enter into legal contracts with the selected minigrids, again supported by appropriate expertise, and make payments on pre-defined milestones, including on commissioning of minigrid plants. The digital platform will validate payment milestones.

This activity may also include capacity building for government personnel with the digital platform, as well as capacity building to private sector actors to engage with the competitive tender.

Activity 2.1.6 *Monitor pilot(s), collect and aggregate data shared by pilot(s)*

Data generated by the pilot(s) will be collected using the digital platform, connecting directly to remote monitoring and smart metering equipment. Data that are not amenable to be collected by

remote sensing will be collected either by the mini-grid operator or some alternative way to be defined by the PMU.

Data collected from the pilot(s) will be used at the project level to, among other purposes: (i) track the performance of the mini-grid systems in real-time; (ii) validate the underlying pilot(s) assumptions and business case; (iii) track performance enhancement in mini-grid capacity utilization; and (iv) generate insights and lessons learned to share with the AMP Regional Project. Also, data collected from pilot(s) will be shared with the AMP Regional Project for aggregating and analyzing data across all AMP national child projects. The regional project will use these data to: (i) generate insights and lessons learned; and (ii) inform the development of knowledge products, both to be disseminated across AMP participating countries and the broad mini-grid sector.

Activity 2.1.7. Develop project-specific publications to showcase the implemented pilot(s) and encourage replication in other locations in need of off-grid electricity.

Output 2.2. Public programmes (apprenticeships, certificates, university programs) to develop competitive, skilled labor market in the design, O&M, and management of solar and hybrid mini-grids, including technical training on the utilization of online tools for performance monitoring, consumption tracking and billing.

Activity 2.2.1. Analyze existing university and higher learning institutions programs and perform a gap analysis on mini-grid education. Introduce the findings to universities and higher learning institutions as an opportunity, as well as to the authorities in charge of providing the budget to the institutes.

Activity 2.2.2. Analyze existing vocational training programs and perform a gap analysis on mini-grid education. Introduce the findings to the vocational training institutes and to the authorities in charge of providing the budget to these institutes.

Activity 2.2.3. Support the development of partnerships between one of the local institutions and international partners for the development of a one-year academic programme for solar and hybrid mini-grid certification/diploma, and the delivery of course.

Activity 2.2.4. Organize training sessions for teachers from the selected local institutions on the course material to enhance their capacity to facilitate the online sessions by international professors and build their capacity to carry the in-person sessions using course material from partner institutions.

Output 2.3. Support provided to establish, grow and capacitate national industry associations for private sector developers and ESPs.

Activity 2.3.1. Establish linkages between the AMP in Somalia project and international/regional organizations such as the African Mini-grid Developers Association (AMDA)[12], GOGLA[13], the Alliance for Rural Electrification (ARE)[14], or others - as relevant, to discuss existing guidance and explore the potential for setting up a local industry association for solar and hybrid mini-grids in Somalia.

Activity 2.3.2. Conduct a study for private sector mapping to research and collate all of the relevant in-country private players in the mini-grid sector and assess their interest in becoming association members, including a needs assessment for existing associations, primarily the SEA in Somaliland. This will be complementary to the registration platform adopted under Output 1.2.

Activity 2.3.3. Identify the champions in the public sector, who can support the association and provide a direct liaison to the government and key ministries, to ensure the required support is forthcoming.

Activity 2.3.4. Draft the governance structure of the association and hold consultation meetings with interested parties to put in place the operational guidelines, i.e. membership fee to incentivize commitment, voting rights, and membership eligibility.

Activity 2.3.5. Publish information and newsletters on the aspired association using national and social media to ensure wide coverage of information on the establishment of the proposed association and the opportunities which the association can provide for its members, in close collaboration with the CoPs, led by the AMP Regional Project.

Component 3. Scaled-up financing

[12] Africa Mini-grid Developers Association (AMDA) - https://africamda.org/

[13] GOGLA, the global association for the off-grid solar energy industry - https://www.gogla.org/

[14] Alliance for Rural Electrification (ARE) - https://www.ruralelec.org/

The competitiveness of solar and hybrid mini-grid development depends on the commercial viability of the system, but also on the funding opportunities available to the private sector players wishing to engage in hybridization or complete shift to renewable sources. The establishment of an innovative financing mechanism and instruments requires undertaking a holistic analysis of the mini-grid sector, how it operates, existing financing mechanisms and gaps, the stakeholders involved, as well as a study of present and expected challenges potentially affecting the scaling up of investment in the mini-grid sector. The following are some of the aspects such study would investigate:

- An analysis of existing national rural development strategy;
- Appetite for engagement with donor programs, private sector lending institutions, and national commercial operators;
- The capacity of national bodies to manage a funding program;
- The extent and favorability of any national mini-grid related policy and regulation;
- The potential for lobbying and policy guidance;
- A general assessment of the extent to which the political ecosystem is supportive of the mini-grid sector;
- Political considerations such as any upcoming elections;
- An assessment of the transparency and corruption of relevant agencies;
- An analysis of any legal implications of various funding models; and
- Examples of any previous successful funding programs managed by the relevant agencies.

Hence, the activities under this component involve conducting this study and assessment of previous and ongoing financing schemes developed by other development partners in Somalia and Somaliland. The activities also include providing operational guidance and training support to ESPs and stakeholders in the domestic financial sector.

Outcome 3: Financial sector actors are ready to invest in a pipeline of low-carbon mini-grids and concessional financial mechanisms are in place to incentivize scaled-up investment

Output 3.1. Design support, including development of operational guidance, for a complementary funding instrument through which the diaspora and small investors can participate in existing financing mechanisms that have been introduced by other development partners to facilitate finance for vetted mini-grid projects.

Activity 3.1.1. Undertake a mapping exercise to identify all existing and planned national mini-grid funding opportunities and analyze the effectiveness and limitations of financing mechanisms developed by other development partners in the last decade for mini-grid project or other relevant socio-economic development activities, including ESRES (FCDO), SEAP (WB), and GEEL (USAID).

Activity 3.1.2. Conduct a market analysis that looks at rural electrification plans, opportunities for resource mobilization, national capacity for managing funding programs, the political ecosystem, dynamics, and considerations, as well as remittance flows/policies/trends and up and coming fintech solutions for international payments. The resulting report will include a holistic analysis of the financial aspects of the mini-grid sector and its operation and will be complementary to the findings and recommendations of the DREI analyses (Output 1.1).

Activity 3.1.3. Design a funding instrument that can be utilized by the diaspora and small investors to participate in financing low-carbon mini-grid development in Somalia and Somaliland. The instrument shall support financial access to existing female graduates of electrical engineering to establish small business in the mini-grid sector (complementary to the inclusion in training plans under the different outputs).

Activity 3.1.4. Identify the champions in relevant institutions, who can act as key contacts for the integration of the new complementary instrument in centrally administered funding programs, to ensure the required support is forthcoming.

Activity 3.1.5. Develop operational guidance for the developed funding instrument. Publish information on the funding opportunities available for solar and hybrid mini-grid development, using the online platforms adopted under Output 1.2, and other knowledge-sharing platforms offered by the CoPs, led by the AMP Regional Project.

Output 3.2. Domestic financial sector capacity building on business and financing models for mini-grids.

Activity 3.2.1. Identify leading national financial institutions, fintech businesses, and lenders to engage in the design process (Output 3.1) and assess their capacity and appetite for lending into the mini-grid sector.

Activity 3.2.2. Conduct a survey involving the diaspora and small investors to assess their interest in participating in mini-grid related financial schemes and their feedback on existing financing schemes, such as

SOGSGF and SREF, as well as previously implemented de-risking measures, such as the Triangular Model for release of funds adopted by FCDO for ESRES2.

Activity 3.2.3. Conduct workshops with representatives from the institutions identified to create awareness of the opportunities that exist with lending to the mini-grid industry. Present examples of best practice business models and financing mechanisms that are relevant to the Somali market, using the resources to be provided by the CoPs, led by the AMP Regional Project.

Activity 3.2.4. Carry out training workshops for financial institutions including an introduction to the design process of mini-grid financial schemes, and in-depth training on the operationalization of the funding instruments designed under Output 3.1.

Activity 3.2.5. Create linkages between financial institutions, national government agencies, international donors, diaspora, and small investors, ensuring balanced representation of women in each group. The purpose of this will be to explore hybrid and innovative schemes focused on unlocking finance and reducing the costs of capital and risks, such as donor programs creating first loss pools or currency hedging facilities.

Component 4. Digital, Knowledge Management (KM) and Monitoring and Evaluation (M&E)

This component aims to ensure that the AMP in Somalia can (1) link-up to KM activities undertaken at the AMP Regional Project level, and (2) comply with UNDP/GEF M&E requirements. In terms of KM, the results of Component 4 activities will feed data and lessons learned to the AMP Regional Project for onward sharing with other participating countries and the mini-grids ecosystem as a whole. There will also be opportunities for these results to be shared directly with other countries through corresponding KM activities built into each national project looking to promote interaction between other AMP national child projects. Hence, the AMP in Somalia will participate in AMP Communities of Practice (CoPs) which will be set-up and managed by the AMP Regional Project. Participation on the part of national child projects will include attending actual in-person workshops, meetings, or training events. In addition, Component 4 explicitly includes the activities required to comply with M&E requirements from both UNDP and GEF.

Outcome 4: Digital and data are mainstreamed, across stakeholders, into local mini-grid market development. Increased knowledge, awareness and network opportunities in the mini-grid market and among stakeholders, including benefitting from linkages to international good practice

Box 6: Linkages to the AMP Regional Project – Component 4 – Digital, KM and M&E

The project will receive support and guidance from, as well as participate in activities led by the AMP Regional Project in the following key areas of interface between the AMP regional project and the AMP national projects:

- **Digital.**
    a. **Knowledge building/sharing.** The regional project will build and share knowledge with the project on the potential for use of digital tools and solutions, including leveraging minigrid projects' data to improve the commercial viability of renewable energy minigrids.
    b. **Data aggregation platform.** The AMP Regional Project will make a data management platform available to aggregate data from all national project pilots based on a common M&E framework to track Results Framework indicators as well as program objectives, SDG impacts and GHG emission reductions for all child projects.
- **Knowledge Management**.
    a. **Information sharing**. The AMP regional project will support and facilitate knowledge management and information sharing between the regional child project and national child projects, among national child projects, and between the program and the larger minigrid community.
    b. **Insight Briefs.** National projects will gather data and audio-visual content (video footage, photos, etc.) highlighting national project activities which will be the subject of an 'insight brief' to be developed by the AMP Regional Project. The 'insight brief' will be disseminated by the regional project to regional stakeholders and published on the AMP website.
    c. **Communities of Practice**. One of the primary ways national project staff will interface with the regional project is via the 'Communities of Practice' (CoPs) and associated activities/platforms. While it is expected that many of the activities will be undertaken virtually (via internet-based platforms, webinars or digital platforms) it is also expected that the CoPs will include actual in-person workshops, meetings or training events that project staff will participate on. Knowledge tools and good practices around minigrid cost-reduction in a variety of regulatory environments, and research and development tools, such as policy packages, template tender documents, and guidelines on productive use program designs will be made available to national projects.
- **Monitoring and Evaluation (M&E).**
    a. **Common M&E Framework.** The AMP Regional Project will develop, with inputs from national projects, a common M&E framework with SMART indicators to ensure that the program is able to track progress toward its overarching objective. This common M&E framework will include both the Results Framework indicators as well as additional Key Performance Indicators (KPIs) which will be adopted by the national projects to track progress toward project and program objectives (i.e. minigrid cost-reduction). The project will thereafter provide on an annual basis (and to the extent feasible if requested on an ad-hoc basis) the following M&E information to the AMP regional project staff: (a) Standard reporting on all indicators in the results framework; and (b) Reporting on all additional Key Performance Indicators (KPIs) adopted by the project under the common M&E framework.
    b. **Operational support for national project M&E activities.** The AMP Regional Project will provide support to the project, through its PMU staff or by hiring or recommending subject matter experts, for the project to execute M&E activities such as the inception workshop, ongoing monitoring, and project evaluations. Further details provided in Section VI. MONITORING AND EVALUATION (M&E) PLAN.

Output 4.1. A Project Digital Strategy is developed and implemented, including linkages to and following guidance from, the AMP Regional Project.

Activity 4.1.1. *Develop and implement a Project Digital Strategy.* All national child projects will develop a Digital Strategy for the project in year 1 which will be implemented thereafter. The Project Digital Strategy will updated on an annual basis to reflect learnings from project implementation, guidance received from the AMP Regional Project on digital tools and solutions, and insights gained from minigrid pilot(s) data.

Activity 4.1.2 *Develop recommendations for a national-level digital strategy for minigrid development*. Upon implementation of the Project Digital Strategy and based on lessons learned around opportunities to leverage digital tools and solutions for minigrid sector development, all national child projects will develop a set of evidence-based recommendations for rolling out digital solutions for minigrids at the national level. These recommendations will be shared with key national stakeholders and provide the basis for developing a digital strategy for minigrid development post-project.

Output 4.2. A 'Mini-grids Digital Platform' implemented to run tenders and manage data from pilot(s), and to support mini-grids scale-up and cost-reduction.

Activity 4.2.1. *Develop Terms of Reference (TORs) for procuring a Mini-grids Digital Platform.* All national child projects will use standardized TOR provided by the AMP Regional Project and tailor them to the specific country/project needs. Box 7 provides indicative specifications for the Digital Platform which the AMP regional project will develop further into standardized TOR and the project PMU will tailor to the specific country/project needs.

Box 7: Indicative Specifications for the Project's Digital Platform

The project digital platform will provide key functionality for the project in terms of acting as the (i) national digital convening platform for key stakeholders (public/private), (ii) providing ongoing data gathering and M&E on minigrids, including linking to the AMP regional project and (iii) acting as the mechanism for tenders for minigrid developers/sites.

Functionality	Details
National digital convening platform for key stakeholders	• Set up of a country-specific, web-based platform to manage all technical and financial data related to minigrid sites at the site and portfolio level • Single site register of minigrid sites, with geospatial views and technical/financial benchmarks for site assessment • Set of best-in-industry tools for analyzing minigrids, including demand forecasting, minigrid system design and optimization, and financial modeling • Capacity-building and in-depth training of key government and other stakeholders to use analytical tools and data management technologies
National monitoring and evaluation platform (remote monitoring & analytics)	• Direct integration with smart meters and remote monitoring systems for live data feeds and monitoring (with options to address lack of remote monitoring systems or other restrictions) • Big data analytics and customized reporting to calculate and report on standardized metrics for pilot performance, based on project QAMF • Quality assurance of data quality, accuracy, relevance, consistency • Interactive tools to analyze data, filter, and view at varying levels of granularity • All pilot-specific data can be rolled up into national view, and all country-specific data can be rolled-up into regional view
Financing platform for running tenders to select minigrid pilot beneficiaries	• Complete end-to-end management of e-tenders for mini-grids customized to specific project/pilot needs (e.g. customized technology solutions, customized workflow, customized KPIs for pilot monitoring) • Automated proposal analysis for quantitative proposal components • Remote verification of connections through smart meter integrations • Automated M&E analytics for all RBF program indicators (connections deployed, amounts paid, gender/environmental impact metrics, etc.)

Activity 4.2.2. *Procure Mini-grids Digital Platform.* All national child projects will procure a country-level mini-grids digital platform and set it up to enable (i) convening and capacity building for key stakeholders (public/private), (ii) collecting and managing technical and financial data related to minigrid pilot(s) based on the project's Quality Assurance and Monitoring Framework (QAMF), including linking to the AMP Regional Project, and (iii) acting as the mechanism for running digital tenders for minigrid developers/sites.

Output 4.3. A Quality Assurance and Monitoring Framework (QAMF) for measuring, reporting and verification of the sustainable development impacts of all mini-grid pilot(s) supported, including GHG emission reductions, is adopted and operationalized based on standardized guidance from the AMP Regional Project.[15]

Activity 4.3.1. *Provide inputs and feedback to the regional project on the development of a standardized Quality*

[15] The national project will not need to 'develop' their own QAMF; it will be developed by the AMP Regional Project and 'adopted' and used by national projects. They will simply need to adopt it and ensure that it is adopted and utilized by all mini-grid operators receiving support.

Assurance and Monitoring Framework (QAMF). The specifications around the data generation by the demonstration pilot(s) supported by the project will consult and follow the guidance/standards provided by the regional child project. A standardized Quality Assurance and Monitoring Framework (QAMF) for application in all mini-grid pilot(s) supported under AMP national projects will be developed in year 1 of the regional project and disseminated to all national project staff. It is expected that national project staff will provide both inputs and feedback on the development of this framework as well as on how best to operationalize the commitment to its adoption by the mini-grid operators receiving support from the national project.

Activity 4.3.2. *Adopt and utilize the standardized Quality Assurance and Monitoring Framework (QAMF)*. The adoption and utilization of this framework and associated data reporting protocols will be a mandatory requirement for all mini-grid pilot(s) supported under AMP (e.g. applicable to all national projects) and each mini-grid operator/sponsor who is the beneficiary of investment subsidies and technical support by the project will be required to formally commit to using the QAMF as a condition of assistance. The adoption of the QAMF by all mini-grid operators/sponsors supported under AMP national projects will ensure that the regional project can aggregate common data metrics and track a standardized set of key performance indicators across all mini-grid pilot(s) supported by AMP across all partner countries and report this data to the donor on a programmatic level.

Output 4.4. M&E and Reporting, including (i) Conducting inception workshop and preparing report, (ii) Ongoing M&E, (iii) Mid-term Review (MTR), and (iv) Terminal Evaluation (TE).

Activity 4.4.1. *Conducting inception workshop and preparing report.* A project inception workshop held to officially launch the project and, among other aims, familiarize key stakeholders with the detailed project strategy, roles and responsibilities of the project team. The national inception workshop will be carried at the beginning of project implementation (within 60 days of CEO endorsement of this project). The workshop will be organized by the PMU with support from the project's IP. An Inception workshop report will be prepared by the PMU and submitted to UNDP within 90 days of CEO endorsement of this project.

Activity 4.4.2. *Ongoing project monitoring.* Data on Results Framework Indicators systematically collected and analyzed to provide decision-makers, managers, and Stakeholders with information on progress in the achievement of agreed objectives and the use of allocated resources, as set out in the Monitoring and Evaluation Plan.

Monitoring provides management and the main stakeholders of an ongoing intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. It provides regular feedback on performance of projects and programs taking into account the external environment. Information from systematic monitoring serves as a critical input to ongoing management decisions (adaptive management), evaluation, and learning. The GEF Core indicators included in the UNDP Project Document (Annex 15) will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Also, the indicators found in the Results Framework will be monitored as per the Monitoring Plan in Annex 5 and the M&E Plan and Budget in Section VI of this project document.

The UNDP-GEF project is accompanied by various plans including Stakeholder Engagement Plan (Annex 9), mitigation plan for project risks (Risk Register in Annex 7), and Gender Action Plan (Annex 11). These plans will be reviewed according to the monitoring and evaluation requirements. According to the project's social and environmental risk rating, there is a need to carry out continuous monitoring of the social and environmental safeguards as proposed in the Environmental Social Management Framework (ESMF) and other SES frameworks/plans (Annex 10). The ESMP that will emanate from the ESMF will also be monitored under this activity.

Data collected by monitoring GEF Core indicators, Results Framework indicators, project plans and social and environmental safeguards will be used to prepare the PIR to report to the GEF.

Activity 4.4.3. *Mid-term Review (MTR).* An independent mid-term review (MTR) will take place at the half-way mark of project implementation and will be conducted according to guidance, rules and procedures for such evaluations established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects. The MTR will be make widely available to all project stakeholders in the relevant language.

Activity 4.4.4. *Terminal Evaluation (TE).* An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The project's terminal GEF PIR along with the TE report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lessons learned and opportunities for scaling up.

Output 4.5. Engage with the AMP Regional Project, including, but not limited to, via (i) Participating in Communities of Practice (CoPs), and (ii) Capturing and sharing lessons learnt.

Activity 4.5.1. *Participate in AMP 'Communities of Practice' (CoP)*. One of the primary ways national 'child' project staff will interface with the regional project is via the 'Communities of Practice' (CoPs) and associated activities/platforms. While it is expected that many of the activities under the Regional Project Component #3 will be undertaken virtually (via internet-based platforms, webinars or digital platforms) it is also expected that the CoPs will include actual in-person workshops, meetings or training events.

Activity 4.5.2. *Sharing of research and lessons learned with the regional child project*. Research and lessons learned will be systematically shared with the regional project based on guidelines that will be defined by the regional project and shared at the project's Inception Workshop. Capacity building will be provided to the Project Management Unit to compile lessons learned and share knowledge effectively.

Activity 4.5.3. *Collaborate with the regional project on an 'Insight Brief'*. Every national 'child' project is expected (in the course of the four years' implementation cycle) to collaborate with regional project staff on the development of at last 1 'insight brief' capturing (in an accessible format) selected key highlights from a successful national project activity. The 'insight brief' can cover any activity of the project and take the form of a written brief or video brief. The regional project has budgeted resources for the production of 'insight briefs' under Component #1 Knowledge Tools, but the success of regional staff in producing insight briefs highlighting national project activities will be dependent on content and data provided by the national project team and stakeholders. In order to facilitate such collaboration each national project is required to hire a consultant or local firm to gather data and audio-visual content (video footage, photos, etc.) on the subject for the 'insight brief'. The information and data collected at the national level will be provided to the regional project staff who will utilize this content and produce an 'insight brief' according to a standardized communications format for all AMP knowledge products for external audiences. The 'insight brief' will be produced in both the local/national language of the relevant national project as well as English for dissemination by the regional project to regional stakeholders and publishing on the AMP website.

It is important to note that some of the abovementioned project results will be realized by co-financing activities with resources that do not flow through UNDP accounts. In particular, the mini-grid pilots to be built in the projects (Output 2.1) will be funded through a CAPEX (partial) subsidy from the project budget (GEF funds and UNDP TRAC), and the remaining of the CAPEX will be funded by third parties (who will likely be private sector developers and communities but those are not precisely defined yet). While the funds from third parties will not flow through UNDP accounts, they will directly contribute to the same mini-grid pilots the GEF and UNDP funds are contributing to and will be essential to realizing the project objectives. For this AMP child project, these are "co-financing activities included as project results". The precise sources and amounts of these co-financing activities will only be known at implementation stage. UNDP is accountable to monitor all project results, including results to be delivered by these co-financing activities, to ensure consistency with UNDP and GEF policies and procedures, including social and environmental safeguards policies and requirements (SES). This is further detailed in the ESMF.

For these co-financed activities included as project results with resources that do not flow through UNDP accounts, the following procedures will need to be applied before co-financing activities start:

The co-financing partner's capacities will need to be assessed through the Partner Capacity Assessment Tool (PCAT) and the co-financing partner will need to develop a risk management strategy if gaps are identified, for UNDP's approval and subsequent oversight/assurance.

The co-financing partner will need to sign a legal agreement with UNDP or the Implementing Partner to confirm accountabilities, mentioning in particular the following sentence: "*The co-financed activities will be undertaken in full compliance with [co-financing partner's] policies and procedures. However, because the activities are included in the results of the project the [co-financing partner] commits to monitor these activities consistent with the UNDP Project Document. The Project Board and UNDP will also assume an oversight and assurance role to further ensure the project, including the co-financed activities covered by this letter, remains consistent with UNDP policies and procedures. These arrangements will be confirmed through [signature of Project Document OR signature of Responsible Party Agreement with reference to the Project Document]*.".

Risks stemming from and/or to co-financed activities – as with risks from/to all other project activities – will be included in the project risk register and monitored accordingly. The risk description will clarify relation to the specific co-financing.

Social and environmental risks associated with the co-financed activities will be identified during project design and included in the SESP and relevant safeguard management plans. Relevant safeguards instruments prepared by the co-financing partner will be reviewed by UNDP for consistency with UNDP's SES, during project development and implementation; any gaps will be resolved in discussion with the co-financier.

Once the co-financing activities will have started, risks will need to be monitored (as per item 3 above) and results achieved through co-financed activities will be monitored and reported in the annual GEF PIR, the independent mid-term review and the independent terminal evaluation.

ii. Partnerships

Successful implementation of the project strategy to achieve the expected results requires close, continuous, and reciprocal communication between the UNDP CO in Somalia and government parties in Somalia and Somaliland. In addition to the several groups of stakeholders, the following list presents some of the key public partners with specific roles in project implementation:

- Ministry of Energy and Water Resources (MoEWR) in Mogadishu;
- Ministry of Energy and Minerals (MOEM) in Hargeisa;
- Energy Regulatory Commission (ERC) for Somaliland;
- Puntland State Authority for Water, Energy, and Natural Resources (PSAWEN) in Garowe;
- Somali Bureau of Standards (SBS); and
- Somaliland Quality Control Commission (SQCC).

Given the domination of the private sector on the development and operation of mini-grids in Somalia and Somaliland, working with ESPs will be key to achieving successful implementation of the project activities. Hence, the AMP dedicates part of the GEF funds to activities with ESPs as direct beneficiaries. For example, private developers and ESPs in Somaliland are represented through the Somaliland Electricity Association (SEA). There are no equivalent associations for ESPs in Somalia. Therefore, Output 2.3 aims to establish and capacitate industry associations for mini-grids in Somalia. Another example is presented in Output 2.2, which aims to institutionalize an academic certification/diploma for the design, O&M, and management of mini-grids. With these outputs, the AMP aims to partner with developers and ESPs on activities which bring direct benefits and translate into financial profit, while other activities are dedicated to ensuring the public parties are equally capacitated and can extend these benefits to end-users in rural areas.

The following are some of the private sector companies which the AMP in Somalia engaged with during PPG development. They were also among the ESPs demonstrating interest in co-financing hybridization projects in the cities they operate in:

- Aloog Electricity Co. (AEC), Borama
- BEDER Electric Co., Aynabo
- Horn Electricity Co. (HECO), Burao
- Sanaag Electricity Power Co. (SEPCO), Erigavo

In the implementation of the AMP project UNDP will build complementarity and leverage on the experience from the ongoing energy projects such as the UN Joint Programme for Sustainable Charcoal Reduction and Alternative Livelihoods (PROSCAL), drought and covid-19 response projects which entail the installation of solar systems in public facilities to enhance reliability of energy supply and promote the use clean and renewable energy options.

With respect to partnering with international organizations, the last decade witnessed several interventions in the mini-grid sector in Somalia and Somaliland by development partners. The interventions took the form of grants and loans for pilot project(s), as well as technical assistance to support the development of regulations and building national capacities in the public and private sectors. The development partners working in Somalia and Somaliland are already fully aware of the importance of coordination among donors and financiers. They have regular "Energy Sector Coordination Meetings", coordinated by the implementing partner for Power Africa Project - an initiative financed by the USAID. During these meetings, the parties discuss the development in the sector and align their goals and resources to efficiently serve the beneficiaries of different projects. The strategy developed for the AMP in Somalia emphasizes the necessity to work hand-in-hand with other development partners, making explicit reference to ESRES and SEAP projects, financed by the FCDO and WB, respectively. The project will also engage with the GEEL project, financed by the USAID, especially during the work on innovative financing.

A number of the abovementioned partners have provided letters of co-financing for this project. As further described in the table below, most of these co-financed activities correspond to funds not flowing through UNDP accounts and whose results are not included in the project results framework. In this case, UNDP is accountable to monitor the risk to realization of co-financing amounts and realization amounts annually in the GEF PIR, at mid-term and at terminal evaluation. Specifically, potential risks associated with co-financing that may affect the Project, including safeguards related risks that fall within the project context or area of influence, will be considered in safeguards due diligence and the project risk register and monitored accordingly. Risk management measures identified will be only those within the control of the UNDP project (e.g. managing reputational risk). See the ESMF for more details on the management of risks related to the different types of co-financed activities in this project.

List of co-financed activities not included as project results

Co-financing source	**Co-financing type**	**Co-financing amount (USD)**	**Included in project results?**	**If yes, list the relevant outputs**
Ministry of Energy	In-kind	3,500,000	No	N/A
World Bank	Grant	157,200,000	No	N/A
Swedish Cooperation (Sida)	Grant	10,000,000	No	N/A
UNDP	Grant	750,000	No	N/A
TOTAL		**171,450,000**		

iii. Risks

Like any project, the implementation of the proposed strategy for the AMP in Somalia faces risks which threaten the achievement of the aspired results, hence, successful achievement of the project's objective. When identifying potential risks affecting project implementation, the risk level is also assessed to identify whether the risk is high, substantial, moderate, or low, which entails assessment of the likelihood and impact of each identified risk. The project strategy has taken the identified security, political, strategic, health, organizational, operational, and financial risks into consideration, offering embedded mitigation measures in the design of outcomes and outputs. More details on the type of risks potentially facing project implementation and the proposed mitigation measures are presented in UNDP Risk Register (Annex 7).

In terms of climate risks, the PPG discussions and analysis indicated that the greatest risk posed by climate change to the project involve either risks to the structure, due to forces of nature in the pilot area(s) (primarily higher wind speeds) or the remote chance of migration of some villages due to drought, flooding, or the disruption of revenue-

generating activities. In the former case, resilience to potential climate change impacts is relatively easily achieved through reinforced structures which do not present any significant impediment to the project. Solar modules and standard solar mountings are already designed for very high wind speeds unlikely to be observed in the project country, even with climate change. For sustainable adaptation to climate risks, the project also includes an output focusing on the selection and domestication of quality standards for solar components to ensure the durability and resilience of future solar and hybrid mini-grid systems. The COVID situation is also a vector of risk to the project, as described in section II-v above as well as in the risk register.

By design, mini-grid systems are significantly more mobile than other infrastructure such as dwellings and grid transmission lines. Villages moving as a result of climate risks materializing at the pilot location(s) is a relatively remote risk, and would have. Nevertheless, the manual for solar mini-grid installation shall include instructions for disassembly and dismantling enabling the re-allocation of the mini-grid infrastructure to new places, as may be necessary.

With respect to other SES-related risks, preliminary analysis and screening was conducted during PPG development through updating the UNDP's Social and Environmental Screening Procedure (SESP) and the preparation of an Environmental and Social Management Framework (ESMF). The results are presented in Annexes 6 and 10, respectively.

In addition to the above plans, the project will establish a Grievance Redress Mechanism (GRM) to ensure effective implementation of the proposed mitigation measure and enhance the responsiveness to new risks or concerns which may be identified by the project team or reported by stakeholder during implementation. The outline of the proposed GRM is presented in the project's Stakeholder Engagement Plan (Annex 9). More details of the proposed GRM shall be agreed upon during the Inception Phase. Further information on GRM can be found in the UNDP Guidance Note on Social and Environmental Standards, Stakeholder Engagement, and the Supplemental Guidance on GRM.

iv. Stakeholder engagement and south-south cooperation

The PPG development process involved conducting several consultation meetings and workshops with public authorities and private sector parties in Somalia and Somaliland, during which stakeholders were invited to share their views on the obstacles facing low-carbon development in the mini-grid sector and their suggestions for the best way forward. The feedback and comments by stakeholders were taken into consideration when developing the project strategy presented in this document. The consensus on the strategy and expected results is aspired to lead to successful project implementation. Furthermore, the project management arrangement embraced the need for the UNDP Somalia, as the implementing partner, to work closely with all national stakeholders as a necessary ingredient for project success. Additional details on the project's approach towards stakeholders' engagement can be found in the Stakeholder Engagement Plan (SEP) presented in Annex 9.

In addition, to bring the voice of national parties in Somalia and Somaliland to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on low-carbon mini-grid development. The project will furthermore provide opportunities for regional cooperation with countries that are implementing initiatives on low-carbon mini-grid development in geopolitical, social, and environmental contexts relevant to the AMP in Somalia.

Furthermore, the proposed strategy for the AMP in Somalia intends to capitalize on the project being part of the AMP Regional Project and use all possible opportunities for South-South and Triangular Cooperation. Hence, the AMP in Somalia will have access to (if requested) a variety of dedicated technical and operational support from the AMP Regional Project as follows:

1) **Access to specialized expert international consultants in selected areas** (DREI, data, GIS modelling, mini-grid business models, etc.) hired, retained, contracted, and paid for by the AMP regional project and made available to all participating national 'child' project staff and selected beneficiaries on as needed basis. The areas of support, listing of available firms/ICs under contract by the regional project and protocol for how the project can request and/or access such expertise (if needed/requested) will be elaborated in the first year of regional project implementation and disseminated to this project and the staff of all other participating AMP national 'child' projects. This support may range from virtual assistance to in-country missions. All requests for such assistance must be approved by the project manager of the AMP regional project management unit.
2) **Provision of a database of qualified international consultants and firms** disaggregated by their expertise in the four main components of the national project and other key operational areas (procurement, M&E, communications, etc.). These individuals will not be retained or contracted under the regional project but rather provided to the project for informational purposes only in an effort to assist in identifying high-quality experts and

firms who may be available for contracting by national governments under their own procurement rules and modalities.

3) **Provision of generic ToRs for various standard activities** (mentioned above) under the four main components of the national project.
4) **Advisory support by the AMP regional project management unit** to staff of the project on trouble shooting (operational support, ToR reviews and problem solving) on an ad-hoc and as-needed basis. These services will be paid for the regional project and available on a first-come/first-serve bases under a protocol to be established by the regional project.

A full detailed elaboration of these offerings and the protocols attached to each service will be communicated to the project at the inception workshop of the AMP Regional Project and at the inception workshop of each national child project.

v. Gender equality and Women's Empowerment

As per the GEF guidance, a Gender Analysis was performed and a Gender Action Plan has been developed for the AMP in Somalia (see Annex 11). The gender analysis identified the following key gaps in terms of the status of men, women boys and girls in their access to clean energy and their roles and contributions in the production and distribution of electricity:

- With very limited access to electricity in rural areas and due to culturally assigned roles and responsibilities everyday Somali women and girls travel long distances to collect firewood, grind flour using traditional methods, cook in an open fire and prepare dung cakes to satisfy household energy needs. Girls' study less time due to absence of lighting during nighttime faced with vulnerabilities to gender-based violence. As compared to men, access to clean energy is transformative fundamentally addressing the above-mentioned challenges uniquely experienced by women and girls.
- There is favorable constitutional and policy back-up to address gender equality and women empowerment issues in various sectors including the energy sector. However, in terms practical steps a lot of gaps exist mainly due to gender relations are governed by customary laws, strong social norms shaped by Islamic religion accompanied by limited institutional capacities to systematically identify and address gender gaps. For eg. The Somalia National Energy Policy 2018 and Somali Electricity Bill 2020 neither acknowledge the different needs and priorities of men and women in relation to access to energy nor create institutional set-up to make equitable considerations and actions in the design and implementation of energy access interventions.
- Among the 24 independent ESPs in Somaliland which are owned by private sector who also run the generation, distribution and transmission systems none of them are owned by women and even if there might be women holding shares data is not available. Furthermore, information is rare about women's participation in the operation and maintenance aspects of ESPs.
- As compared to men Somali women are uniquely identified with great entrepreneurial skills creating and successfully running small business but not supported as such particularly in the energy sector.
- Data is not available on how many female and male students are enrolled in vocational training schools to be targeted and trained as mini-grid technicians.
- Three-quarters of women aged 15-49 own a mobile phone and 64 percent use their mobile phones for financial transactions and women are found to be active and friendly in adopting digital processes.
- Existing interventions such as World Bank's Somali Electricity Access Project 2018 has a focus on addressing gender gaps by tracking beneficiaries disaggregated by sex, Solar home distribution to be 25% women led, Training of solar distributors, incentives to women led enterprises with the focus on lighting and TV.

As per the findings the following are some of the examples of gender transformative actions aligned with the four components of AMP:

- Support capacity building training for women professionals and emerging female students in the mini-grid sector for their systematic engagement in policy level dialogues.
- Intentional integration of gender dimensions in policy analysis and study designs which will be supported by this project.
- Establish female-cohort of mini-grid technicians from rural areas through vocational training opportunities.
- Capitalize on women's entrepreneurial skills to engage them in the value chain of the energy mix ESP, off-grid solar.

- Provide targeted finance/incentivize to women owned business to engage in ESPs, purchase of electrical appliances to start-up or improve business.
- Prepare minimum standards on the engagement of women in various capacity building trainings, consultation meetings on tariff, digitalization process, business opportunities to be created by this project.
- Identify women managed business such as milk and ghee production to be supported by modern electrical appliances.
- Incentivize existing women and girl graduates of electrical engineering to establish small business in the sector.
- Incentivize OGS companies and ESPs to higher women at different points of the value chain.
- Provide incentives to OGS companies to market and sell quality products to women only/lead businesses and households.
- Document success stories, set gender and clean energy as an agenda in the community of practice to be established by this project.

vi. Innovativeness, Sustainability and Potential for Scaling Up

Innovativeness

Given the existing reliance on mini-grids, and the previous work of other development partners to introduce low-carbon mini-grids to the markets in Somalia and Somaliland, innovativeness is a primary concern for the AMP and is an overarching goal in all project components. Therefore, the AMP in Somalia starts the work on each output by investigating the most suitable way for enhancing the competitiveness of low-carbon mini-grids by exploring innovative ways to (1) encourage the people, and (2) finance the systems. This is achieved by conducting detailed studies, analyses, and assessments that aim to propose tailored practices and develop fit-for-purpose regulatory, organizational, and operational solutions.

For example, and building on the assessments and discussions during PPG development, innovative ways have been proposed to create government visibility on the mini-grid sector with minimal disruption to private-sector operation. This includes supporting digital transformation in the value chain for energy supply, i.e. on the generation side but also on consumption side, as well as supporting the operationalization of existing regulatory bodies and enhancing their capacity to utilize private-owned mini-grids to promote renewable energy and achieve higher access rate.

The project also aims to promote a mini-grid business model that builds upon the developments achieve by projects financed by the government and other development partners. The proposed pilot(s) aim to demonstrate this model and showcase the impact of balancing private-lead development in the energy sector with national plans for energy access and low-carbon economic development. Recognizing that the role envisioned form public parties is relatively new to the Somali market, the project focuses heavily on capacity building for public and private actors to ensure smooth transition into the proposed model and ensure it is not counter-productive in terms of attracting new investment in the renewable and hybrid mini-grid sector.

Sustainability

From operational sustainability perspective, the partnership with public and private parties does not only facilitate project implementation, but also increase the medium and long-term sustainability of all project outcomes. Sustainability was the main aspect guiding the inclusion of outputs that tackle the review of the institutional setup for the mini-grid public sector and the establishment of industry associations for private ESPs under Component 1, and dedicating resources to institutionalizing the capacity building effort by establishing a complete academic programme under Component 2.

From the perspective of sustainable approach to knowledge production and sharing, Component 4 dedicates resources to KM on the national and regional levels. These aspects are stronger in this project than other mini-grid projects and initiatives in the country since the AMP in Somalia is part of a regional programme, giving it access to a regional hub for mini-grid technical support, a wealth of experience sharing between the participating countries, and an opportunity to become part of the Communities of Practice (CoP) to be established by the Regional AMP Project.

From a climate change perspective, increasing the commercial viability of low-carbon mini-grids will have long-term positive environmental and economic impacts. The proposed project activities contribute significantly towards helping insulate communities from some of the risks of climate change. With the potential for increased adverse weather events, the delivery of diesel to support conventional mini-grids may be interrupted for significant periods. The use of

solar-powered mini-grids significantly reduces or eliminates the needs for diesel delivery therefore enhancing the sustainability of communities and their resilience to climate change.

Furthermore, promoting low-carbon development is also in line with the recommended global response to COVID-19 crisis and helps to reduce the risk of emerging infectious diseases in the future, while increasing the resilience of the ecologic and socio-economy systems to emergency situations.

Potential for scaling-up:

Enhancing the potential for scaling up is the primary goal of Component 3, under which the project dedicates resources to work with small investors, the diaspora, and domestic financial institutions, paving the way for mobilizing additional financial resources to replications of the AMP pilot(s) beyond the project lifetime. These activities aim to ensure that the development path for the mini-grid sector in Somalia does not stop at donor-funded projects. At project end, the business model will be in the hands of the people of Somalia; government, ESPs, developers and users, connected by an online platform that generates data on opportunities and enables tracking of performance to ensure fair approach to tariff setting and context-specific de-risking measures, hence, strategic effort towards resource mobilization.

In addition, the project design aims to ensure that the proposed model can be replicated and that the parties are able to undertake similar activities when developing future projects. This is achieved by conducting detailed studies, analyses and assessments that aims to propose tailored practices and develop fit-for-purpose regulatory, organizational, and operational solutions, including the DREI techno-economic analyses.

There were also measures that have been expanded into independent outputs instead of activities tackling only the pilot(s) under the AMP. For example, the establishment of an industry association for private sector developers in the mini-grid sector may not be of direct use to the AMP pilot(s), but it paves the way for further public-private partnerships going forward. Similarly, the implementation team for the AMP in Somalia will ensure the use of high quality components for the pilot system(s), yet the development of quality standard for system component is included in the AMP outputs to ensure high quality is maintained by future projects replicating the AMP business model.

Furthermore, the multi-dimensional COVID-19 crisis creates opportunities for the AMP to mitigate country- and project-level impacts, to contribute toward green recovery and building back better, and also to leverage global responses to COVID-19 to deliver global environmental benefits and/or climate adaptation and resilience benefits**.** The following opportunities are identified as relevant for the AMP in Somalia:

- **Leveraging economic recovery and stimulus plans**. Governments across the continent have been structuring and implementing stimulus and economic recovery plans, social programs and even policy reforms during the crisis. These offer a good opportunity to accelerate the energy transition and step-up climate ambition. Putting people back to work will be an important part of stimulus plans and clean energy is an important source for new job creation and has great potential to spur local economic activity. This creates opportunities for AMP as increased funding availability and public support for renewable energy projects could be leveraged to augment AMP's results. Also, increased support to energy consumers could address widening affordability gaps which pose risks for project implementation.
- **Minigrid site selection with COVID-19 considerations.** AMP projects could also seek to help policymakers and regulators integrate elements from government strategies to respond and recover from the pandemic into energy sector planning. For instance, rural electrification strategies and plans could prioritize areas based on the presence of essential health facilities, key economic activities, particularly vulnerable populations, or other factors to concentrate efforts where COVID-19 impacts are highest. AMP national child projects can help enhance coordination between the energy and health sectors to ensure national electrification plans and minigrid sector planning consider the energy needs of the health sector.
- **Health facilities as beneficiaries of specific minigrid investment pilots.** AMP projects provide support to a number of specific minigrid investment pilots across AMP countries. Projects could use digital mapping tools to proactively identify minigrid sites that can benefit health facilities in addition to households, commercial, and productive users.
- **Improved business case for minigrids providing energy for health facilities.** With its focus on minigrid cost-reduction, AMP could potentially add value in reducing the cost and increasing the commercial viability of minigrids providing energy for healthcare facilities in several ways including supporting governments: (i) to improve data collection on energy access in the health sector and conducting comprehensive community energy needs assessments of health facilities that consider both electricity and thermal energy needs; and (ii) to utilize specialized digital tools to assist minigrid operators in targeting health care providers and designing appropriate minigrid systems for rural health clinics.

- **Communities of Practice focused on COVID-19 impacts**. If there was enough interest among several countries AMP could create a specific Community of Practice (CoP) to focus on impacts, risks and opportunities around minigrids and the global pandemic. This would allow AMP countries to document and exchange experiences and knowledge on how off-grid lighting and electrification can alleviate some of the disadvantages and challenges experienced by households, productive users, health facilities and communities without access to electricity in facing the different stages of the COVID-19 pandemic and bolster recovery efforts.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal(s):
SDG 7: Ensure access to affordable, reliable, sustainable, and modern energy for all.
SDG 7.1 By 2030, ensure universal access to affordable, reliable, and modern energy services; and
SDG 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.
SDG 13: Take urgent action to combat climate change and its impacts.
SDG 5: Achieve gender equality and empower all women and girls.

This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD):
UNSDCF Outcome 3.2, Output 3.2.4: The capacity of public and private (for-profit and non-profit) organizations is strengthened to expedite the growth of the information and communications technology ("digital economy") and renewable energy sectors.
CPD Output 3.3: Enhanced access to clean, affordable, and sustainable energy for economic growth.
NDP-9, Pillar-3: Economic Development.

	Objective and Outcome Indicators (no more than a total of 20 indicators)	Baseline	Mid-term Target	End of Project Target
Project Objective: Supporting access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low-carbon mini-grids in Somalia, with a focus on cost-reduction levers and innovative business models.	***Mandatory*** *Indicator 1: GEF Core indicator 6* GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO_2e))	Zero, since the project has not yet started	Zero, since the pilot project(s) is not yet commissioned	Direct: 29,577 tCO_2eq Indirect: 594,000 tCO_2eq (90% of the total estimation for this project)
	Mandatory *Indicator 2: GEF Core indicator 11* Number of direct beneficiaries benefitting from clean, affordable and sustainable energy access via mini-grids, disaggregated by gender and by customer segment (residential, social, commercial/productive use) (number of people)	Zero, since the project has not yet started	Zero, since the pilot project(s) is not yet commissioned	66,670 people (of which 50% women) ------- 65,570 people (residential) 210 people (social) 710 people (commercial/PUE) 66,670 people (total)
	Indicator 3: GEF Core indicator 6.4 Increase in installed solar PV capacity (MW) and battery storage (MWh)	Zero, since the project has not yet started	Zero, since the pilot project(s) is not yet commissioned.	Solar PV: 2.116 MW Battery storage: 3.300 MWh
	Indicator 4: Number of local residents trained in different aspects of mini-grid development and operation (e.g. sales, distribution, operations, management) disaggregated by gender (number of people)	Zero, since the project has not yet started	Female: 60 Male: 90 Total: 150 persons	Female: 120 people Male: 180 people Total: 300 people
Project component 1	**Policy and regulation**			
Outcome 1 Stakeholder ownership in a national mini-grid delivery model is advanced, and appropriate policies and regulations are adopted to facilitate investment in low-carbon mini-grids.	*Indicator 5: A minigrid delivery model to enable minigrid development is endorsed/adopted by the national government through a consultative process involving key stakeholders (e.g. relevant ministries, local authorities, rural populations, private sector, media, etc.) (binary (1/0))*	Zero, since the project has not yet started	One Multi-stakeholder national dialogue platform on minigrid delivery models established and active.	At least one minigrid delivery model is identified and endorsed by the government through the work of the multi-stakeholder platform and dialogue.

	Indicator 6: Number of policy derisking instruments[16] for minigrid investments - whose development has been supported by the project - are endorsed/adopted by the national government (number of policy derisking instruments)	Zero, since the project has not yet started	[x] policy derisking instruments.	[x] policy derisking instruments.
	Indicator 7: Online tools for digital transformation of the mini-grid sector are selected and adopted through a consultative process involving key stakeholders (e.g. relevant ministries, local authorities, rural populations, private sector, media, etc.)	Limited capacity for monitoring and regulation	Online tools are selected and consensus among public and private parties is achieved on their adoption as part of the proposed digital transformation activities.	The selected online tools are adopted and staff members in public authorities, including women, are capacitated to utilize them for sector monitoring.
Outputs to achieve Outcome 1	1.1. An inclusive national dialogue to identify mini-grid delivery models is facilitated, clarifying priority interventions for an integrated approach to off-grid electrification. 1.2. Mini-grid DREI techno-economic analyses carried out to propose most cost-effective basket of policy and financial de-risking instruments and contribute to AMP Flagship Report on cost reduction. 1.3. Mini-grid policies and regulations, including tariff model and incentives, are operationalized through digital transformation support, in collaboration with the authorities and other development partners. 1.4. Institutional setup for rural electrification assessed and supported, and institutional capacity building provided on technical, managerial, and regulatory issues. 1.5. Quality standards for solar and hybrid mini-grid components domesticated, and institutional capacity of Somali Bureau of Standards (SBS) and Somaliland Quality Control Commission (SQCC) strengthened.			
Project component 2	**Business Model innovation with private sector engagement**			
Outcome 2 Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini-grid development.	*Indicator 7:* Number of mini-grid pilot(s) implemented that demonstrate a delivery model, cost-reduction measure(s) and/or productive use of electricity (including data on the installed capacity, location coordinates, and commissioning date)	Zero, since the project has not yet started	The project's detailed design plan (the 'Minigrid Pilot Plan') for advancing the minigrid pilots is developed, and cleared by UNDP and the Project Board. Any project tendering process, as applicable, for minigrid pilots is launched.	100% of the planned minigrid pilots, as identified in the project's Minigrid Pilot Plan, are commissioned.

[16] A list of policy derisking instruments can be found in the Derisking Table found in the "DREI: Off-Grid Electrification" (UNDP, 2018) report. As an illustration, example policy derisking instruments can include: off-grid planning/site mapping; mini-grid policies/regulations/tenders; grid service and technical standards; awareness campaigns; technical skill building programs.

	Indicator 8: Capacity of mini-grid developers and/or operators is enhanced to implement innovative business models and incorporate cost-reduction levers in mini-grid projects	ESPs have limited technical and operational capacity	Planned capacity building activities for year 1 and 2 are implemented, in both Somalia and Somaliland. The capacity of targeted recipients is assessed by survey towards the end of year 2. On a scale of 1 to 5, an average score of at least 2 is achieved. - 1 represents a low level of capacity - 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions.	Planned capacity building activities for year 3 and 4 are implemented, in both Somalia and Somaliland. The capacity of targeted recipients is assessed by survey towards the end of the project. On a scale of 1 to 5, an average score of at least 4 is achieved. - 1 represents a low level of capacity - 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions.
Outputs to achieve Outcome 2	2.1. Pilot(s) developed using innovative business models through calls for proposals based on lessons learned from the operationalization of the SREF under ESRES2 and the results of the geospatial mapping under SEAP. 2.2. Public programmes (apprenticeships, certificates, university programs) to develop competitive, skilled labor market in the design, O&M, and management of solar and hybrid mini-grids, including technical training on the utilization of online tools for performance monitoring, consumption tracking and billing. 2.3. Support provided to establish, grow and capacitate national industry associations for private sector developers and ESPs.			
Project component 3	**Scaled-up financing**			
Outcome 3 Financial sector actors are ready to invest in a pipeline of low-carbon mini-grids and concessional financial mechanisms are in place to incentivize scaled-up investment.	*Indicator 9:* Capacity of financial institutions is enhanced through training, knowledge sharing, and/or awareness raising events aimed at increasing the financial sector's capacity to evaluate investments in mini-grids	Domestic financial institutions are not involved in mini-grid funding	Planned capacity building activities for year 1 and 2 are implemented, in both Somalia and Somaliland. The capacity of targeted recipients is assessed by survey towards the end of year 2. On a scale of 1 to 5, an average score of at least 2 is achieved. - 1 represents a low level of capacity - 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions.	Planned capacity building activities for year 3 and 4 are implemented, in both Somalia and Somaliland. The capacity of targeted recipients is assessed by survey towards the end of the project. On a scale of 1 to 5, an average score of at least 4 is achieved. - 1 represents a low level of capacity - 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions.
	Indicator 10: Number of government or impact investor-supported financing mechanisms offering concessional finance for low-carbon mini-grids	Diaspora and small investors are not heavily involved in mini-grid funding	At least one complementary funding instrument is designed to support the participation of the diaspora and small investors in existing financing mechanisms.	Two ESPs in Somalia and two in Somaliland have managed to obtain finance for low-carbon mini grid projects from the diaspora or small investors.

Outputs to achieve Outcome 3	3.1. Design support, including development of operational guidance, for a complementary funding instrument through which the diaspora and small investors can participate in existing financing mechanisms that have been introduced by other development partners to facilitate finance for vetted mini-grid projects. 3.2. Domestic financial sector capacity building on business and financing models for mini-grids.			
Project component 4	**Digital, Knowledge Management (KM) and Monitoring and Evaluation (M&E)**			
Outcome 4 Digital and data are mainstreamed, across stakeholders, into local mini-grid market development. Increased knowledge, awareness and network opportunities in the mini-grid market and among stakeholders, including benefitting from linkages to international good practice.	*Indicator 11:* A project digital strategy for the project is prepared and implemented by the PMU to contribute to project implementation and local minigrid market development	No progress, since the project has not yet started	Digital strategy is prepared, in consultation with public and private parties, and close collaboration with the CoPs led by the AMP Regional Project.	The strategy is implemented and staff members in public authorities, including women, are capacitated to utilize the associating tools and reporting procedure.
	Indicator 12: Number of mini-grid pilot(s) sharing data on mini-grid performance with the regional project and other stakeholders following best practices and guidance provided by the AMP Regional Project	Zero, since the project has not yet started	The project's digital platform is procured and operational, ready for data collection and managed with (i) the project's mini-grid pilot(s) and (ii) the AMP regional project's digital platform.	100% of the planned minigrid pilots, as identified in the project's Minigrid Pilot Plan, are collecting and sharing data with the project's digital platform
Outputs to achieve Outcome 4	4.1. A project Digital Strategy is developed and implemented, including linkages to and following guidance from, the AMP Regional Project. 4.2. Mini-grids digital platform implemented to run tenders and manage data from pilot(s), and to support mini-grids scale-up and cost-reduction. 4.3. A Quality Assurance and Monitoring Framework (QAMF) for measuring, reporting and verification of the sustainable development impacts of all mini-grid pilot(s) supported, including GHG emission reductions, is adopted and operationalized based on standardized guidance from the AMP Regional Project. 4.4. M&E and Reporting, including (i) Conducting inception workshop and preparing report, (ii) Ongoing M&E, (iii) Mid-term Review (MTR), and (iv) Terminal Evaluation (TE). 4.5. Engage with the AMP Regional Project, including, but not limited to, via (i) Participating in Communities of Practice (CoPs), and (ii) Capturing and sharing lessons learnt.			

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex 5 details the roles, responsibilities, and frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[17]. The costed M&E plan included below, and the Monitoring plan in Annex, will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

Additional GEF monitoring and reporting requirements:

Inception Workshop and Report: A project inception workshop will be held within 60 days of project CEO endorsement, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

GEF Project Implementation Report (PIR):

The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

[17] See https://www.thegef.org/gef/policies_guidelines

GEF Core Indicators:

The GEF Core indicators included as Annex will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website.

Independent Mid-term Review (MTR):

The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC).

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by ***01/03/2024***. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

Terminal Evaluation (TE):

An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center.

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by ***01/01/2026***. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

Final Report:

The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information:

To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[18] and the GEF policy on public involvement[19].

[18] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

[19] See https://www.thegef.org/gef/policies_guidelines

Interaction between the AMP in Somalia and the AMP Regional Project**:** M&E is a key area of interface between the Somalia national project and the AMP regional Project. As such, details on this linkages are provided in Box 3 below.

Box 3: Linkages to the AMP Regional Project - M&E

The project will share M&E information with the AMP Regional Project as follows:

- The project will provide on an annual basis (and to the extent feasible if requested on an ad-hoc basis) the following M&E information to the AMP regional project staff: (a) Standard reporting on all indicators in the results framework for aggregation and reporting to GEF (by the regional project) on the impacts of all participating national projects for the program as a whole; and (b) Reporting on any and all additional Key Performance Indicators (KPIs) adopted by the project under the common M&E framework.

The project will receive support and guidance from the AMP Regional Project for conducting M&E activities as follows:

- **Inception workshop**. The AMP Regional Project PMU will:
    a. Provide support to the project PMU to develop content and materials to facilitate project planning activities to be completed during and after the Inception Workshop. This includes but is not limited to support for the PMU to prepare and/or update 'key project planning instruments' such as the Total Budget and Work Plan, multi-year work plan, Annual Work Plan (AWP), Monitoring Plan, and Procurement Plan, among others.
    b. Participate either remotely or in-person in the Inception Workshop.
    c. Review and provide inputs to the Inception Workshop Report prior to submitting to UNDP.
- **Ongoing project monitoring**. The AMP Regional Project PMU will:
    a. Develop a 'common monitoring and evaluation (M&E) framework' against which GHG emission reductions and broader SDG impacts and program objectives can be measured, and work closely with national child projects to ensure operationalization and harmonization.
    b. Provide support to the project PMU for updating 'key project planning instruments' at least on an annual basis as required to comply with UNDP project monitoring, quality assurance, and risk management requirements, and ensure adequate project planning and adaptive management. This may entail developing common templates for 'key project planning instruments'.
    c. Review and provide feedback on reports submitted by the project PMU seeking to continuously improve the quality and ease of reporting by national projects.
    d. Aggregate M&E data from all national projects, including Results Framework and all additional Key Performance Indicators (KPIs) adopted by the project under the common M&E framework, and report back to GEF at the program level.
- **Evaluations (MTR and TE)**. The AMP Regional Project PMU will:
    a. Make available to national projects standardized terms of reference for MTR and TE as well as a roster of vetted evaluation consultants.
    b. Review and provide feedback on terms of reference and draft evaluation reports shared by the project PMU to ensure project-level evaluation will be undertaken in compliance with UNDP requirements.
    c. Make themselves available for interviews and consultation in the context of national project mid-term and terminal evaluations.

Monitoring and Evaluation Budget:

Monitoring and Evaluation Plan and Budget: This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 4 of the Results Framework and TBWP. For ease of reporting M&E costs, please include all costs reported in the M&E plan under the one technical component. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units are not included as these are covered by the GEF Fee.		
GEF M&E requirements	**Indicative costs (US$)**	**Time frame**
Inception Workshop	5,000	Within 60 days of CEO endorsement of this project.
Inception Report	None	Within 90 days of CEO endorsement of this project.
M&E of GEF core indicators and project results framework	Zero, as M&E of GEF core indicators is part of PIR or MTR and TE	Annually and at mid-point and closure.
GEF Project Implementation Report (PIR)	Zero, as GEF PIRs are prepared by the M&E specialist and Project Manager as part of their TORs	Annually typically between June-August.
Monitoring of environmental and social risks, and corresponding management plans as relevant, i.e. fees for SES and Gender Officer(s)	10,000 (2,500 per year)	On-going
Implementing the GRM and addressing environmental and social grievances	6,000 (1,500 per year)	On-going
Supervision missions	None	Annually
Independent Mid-term Review (MTR)	70,000	01/03/2024
Independent Terminal Evaluation (TE)	70,000	01/01/2026
TOTAL indicative COST	**USD 161,000**	

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:

Implementing Partner (IP): The Implementing Partner for this project is ***UNDP Country Office in Mogadishu, Somalia***.

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Risk management as outlined in this Project Document;
- Procurement of goods and services, including human resources;
- Financial management, including overseeing financial expenditures against project budgets;
- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

The AMP in Somalia will follow the Direct Implementation Modality (DIM), where the UNDP CO in Mogadishu will act as the Implementing Partner (IP), responsible for the UNDP-GEF project execution and accountable for the disbursement of funds and the achievement of the project goals, according to the approved results framework and work plan presented in this Project Document. Given the operational context in Somalia all projects in 2021-25 Country Programme cycle are to follow DIM. The project would benefit from on-the-ground operational capacities of UNDP Country Office. UNDP projects and programmes in Somalia are part of four portfolios, including, 1) Resilience and Climate Change; 2) Economic Recovery and Institutional Development; 3) Rule of Law and Security; 4) Inclusive Politics. In addition, UNDP CO have dedicated units for human resources management, finance and resources management and procurements. Senior management in its oversight and compliance functions, is supported by Programme Oversight and Quality Assurance Unit. The oversight functions are independent of Project Management functions with clear delineation of rolls as per the Internal Control Framework (ICF).

Project Management Unit (PMU): UNDP CO will initiate the project by creating the PMU, where a minimum of three staff members will be hired to fill the positions of Project Manager, Finance Officer and M&E Officer. For quality assurance, additional M&E missions will be conducted at MTR and TE by independent (third-party) consultants, however, the PMU will be responsible for the issuance of regular progress reports and ensuring continuous reporting, collaboration and coordination with the AMP Regional Project. Furthermore, the UNDP-NCE Regional Technical Advisor (RTA) will provide an additional layer of project oversight and will participate in regular project team calls to monitor progress and advise on project implementation, as needed.

Responsible Parties:

The project will be under Direct Implementation Modality of UNDP. As such, the accountability for use of project resources and deliver on project results will rest entirely with UNDP. Standard procedures for direct implementation will be followed to mobilize inputs and deliver on results. No responsible parties have been identified in advance. However, if during project implementation UNDP identifies certain activities to be performed by national institutions, procedures laid out as per the Harmonized Approach to Cash Transfer (HACT) framework will be followed. This will involve micro-assessment of national institutions to determine the risks and capacity gaps and

the development of the legal instruments used by UNDP to engage a responsible party. Letters of Agreement or Responsible Party Agreements will incorporate the findings of HACT assessments as per Country Office oversight role before approval of these agreements.

Project stakeholders and target groups:

To ensure sound management of project implementation and continuous engagement of stakeholders in all project activities, the UNDP CO in Somalia, as the project's IP, will establish the following committees at project start:

- *Steering Committee/Project Board*

Consisting of UNDP Resident Representative, the GEF Operational Focal Point and Minister of Ministry of Energy and Water Resources (MoEWR), to oversee project development, governance, and M&E. Board meetings will be held bi-annually. Additional meetings may be scheduled if deemed necessary by the Project Management Unit (PMU).

Being a DIM project, UNDP Resident Representative will chair the Project Board and is accountable for the project. In this role, UNDP Resident Representative is ultimately accountable for the project, working closely with the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier

- *Technical Committee*

  Consisting of representatives from all the stakeholders listed in Section IV, i.e. representatives of ministries, private sector, academia, and NGOs. This committee is expected to meet more frequently than the Project Board and will be responsible for looking into the technical aspects of project implementation.

- *Consultancy Task Force*

  Consisting of international & national experts taking the lead on specific technical assignments and collaborating to ensure the homogeneity of the overall output.

It should be noted that individuals assigned as representatives of Responsible Parties cannot be members of the Steering Committee. It should also be noted that members of the Steering and Technical committees representing public entities will not be paid from the project funds. The cost of their engagement will represent Government contribution to support project implementation.

The target groups under this project can be divided into three categories:

1) State and local government authorities, i.e. public sector entities;
2) Private sector associations and companies;
3) Development partners financing mini-gird, energy access, and renewable energy projects in Somalia; and
4) Local communities.

More data on stakeholder engagement is presented in Section IV and Annex 9 (Stakeholders' Engagement Plan).

UNDP:

UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is also responsible for the Project Assurance role of the Project Board/Steering Committee.

UNDP being the implementing partner for this project, a strict firewall will be maintained between the delivery of project oversight and quality assurance performed by UNDP and charged to the GEF Fee and project execution undertaken primarily by the Implementing Partner and charged to the project management costs.

Project organisation structure:

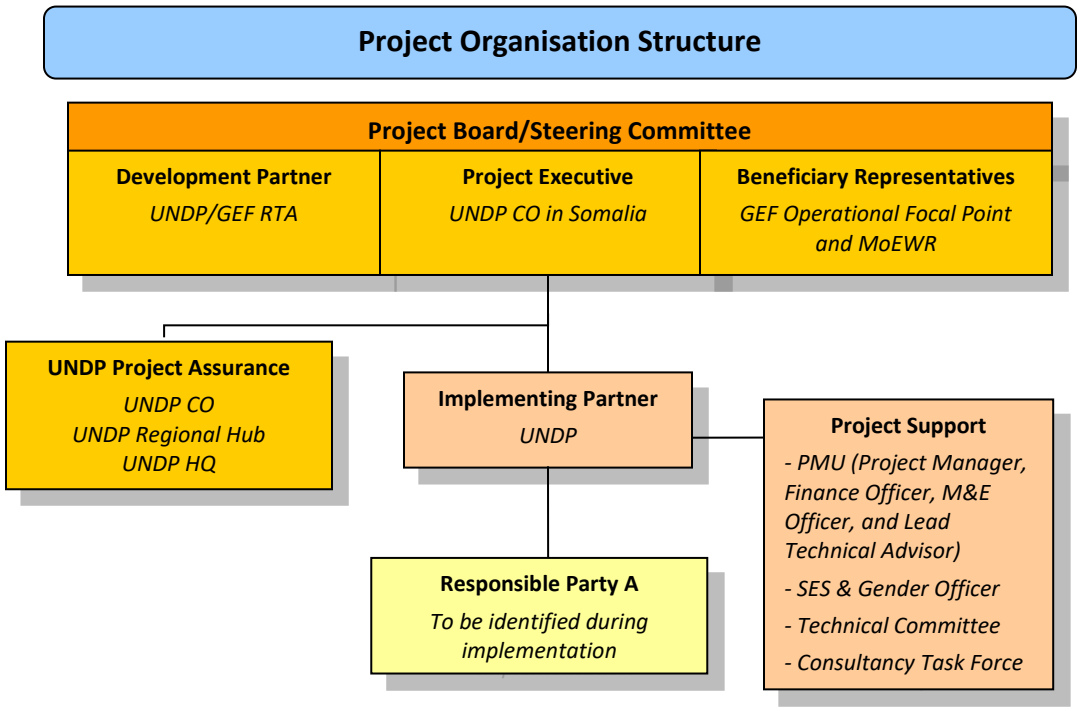


Figure 5: Project organizational structure for the AMP in Somalia UNDP-GEF project

The Project Board (also called Project Steering Committee) is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency, and effective international competition.

In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
- Ensure coordination between various donor and government-funded projects and programmes;
- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;

- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
- Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.
- Designate the representative of the project on the AMP Regional Project's Steering Committee/Project Board

The composition of the Project Board must include the following roles:

a. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects.

The Project Executive is: **UNDP Somalia Resident Representative**

b. Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role.

The Beneficiary representative (s) is/are: **GEF Operational Focal Point and Ministry of Energy and Water Resources will represent project beneficiaries for this project**

c. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project.

The Development Partner(s) is/are: **UNDP/GEF Regional Technical Advisor**

d. Project Assurance: UNDP performs the quality assurance and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed, and conflict of interest issues are monitored and addressed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of project execution.

Representation on the AMP Regional Project's Steering Committee/Project Board: A representative of the project will sit on the project board/steering committee of the AMP Regional Project in a role as 'beneficiary representative.' It is expected that all AMP Regional Project board meetings will be held virtually (i.e. not in-person) and that beneficiary representatives will participate in board meetings via video-conference. The representative of the AMP Somalia project on the AMP Regional Project board will be the **Ministry of Energy and Water resources and GEF Operational focal point**[20]. It is expected that the AMP Regional project board will meet a maximum of twice per year.

Project extensions: The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs in excess of the CO's Agency fee specified in the DOA during the extension period must be covered by non-GEF resources.

[20] This role will be additional to any role in the Somalia national project steering committee. It is recommended this role will be played by either the representative of the IP on the Somalia national project steering committee or the project manager/project coordinator of the project.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is ***USD 174,726,147***. This is financed through a **GEF grant of *USD 3,276,147*** administered by UNDP, ***USD 750,000*** in cash co-financing to be administered by UNDP and additional support of ***USD 170,700,000***. The UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to the UNDP bank account only.

Confirmed Co-financing: The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. Note that all project activities included in the project results framework that will be delivered by co-financing partners (even if the funds do not pass through UNDP accounts) must comply with UNDP's social and environmental standards. Co-financing will be used for the following project activities/outputs:

Co-financing source	**Co-financing type**	**Co-financing amount**	**Planned Co-financing Activities/Outputs**	**Risks**	**Risk Mitigation Measures**
Recipient Government: Ministry of Energy and Water Resources (MoEWR), Federal Government of Somalia	In-kind	USD 3,500,000	Ministry staff time, office space for coordination, engagement of key stakeholders, policy discussions, building synergies with other projects in the energy sector, and staff time of ministries of energy in federal member states.	• *There is a risk (low) that stakeholder engagement in the project will not be as significant as expected, due to the competing demands of stakeholder, other professional and personal commitments* • *(Low) because the capacities of the energy mandated institutions at the federal level are growing at a rapid scale and relevant coordination mechanisms are in place to better coordinate the allocations and implementation of government co-resources across Somalia including similar GEF related projects such as the Integrated Water Resource Management Project, CCCD and the Somalia electricity access by the WB*	• *The existing energy coordination platforms in the Ministry of Energy and Water Resource will be used to enhance the engagement of the relevant institutions at federal, federal member states, and local levels* • *A Co-financing monitoring framework will be developed at the propjet inception phase ad implemented to coordinate effectively the level of progress on the implementation of the committed the government co-financing* • *Also, if the need be, the Risk will be escalated to the ProJet Board on a biannual basis for discussions and way forward actions*
Donor Agency	Grant	USD 157,200,000	Funds disbursed under the WB's programs in energy sector in Somalia	• *Effort is needed during implementation to ensure alignment of the AMP activities with*	• *The project design emphasized the importance of collaboration with different partners and stakeholders and has*

				the programs financed by the WB	*a details strategy for knowledge management and sharing*
Donor Agency	Grant	10,000,000	Funds disbursed under SIDA's support to programs in the energy sector in Somalia	• *Effort is needed during implementation to ensure alignment of the AMP activities with the programs financed by SIDA*	• *The project design emphasized the importance of collaboration with different partners and stakeholders and has a details strategy for knowledge management and sharing*

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board.

Should the following deviations occur, the Project Manager/CTA and UNDP Country Office will seek the approval of the BPPS/GEF team to ensure accurate reporting to the GEF:

a) Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more;

b) Introduction of new budget items that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop.
Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen with 3 months after posting the TE report to the UNDP ERC**. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In

all cases of transfer, a transfer document must be prepared and kept on file[21]. The transfer should be done before Project Management Unit complete their assignments.

Financial completion (closure): The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the BPPS/GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/GEF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

21 See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	00135174	Atlas Output Project ID:	00126498
Atlas Proposal or Award Title:	Somali National Mini-Grids Project		
Atlas Business Unit:	Som10		
Atlas Primary Output Project Title:	Somali National Mini-grids		
UNDP-GEF PIMS No.:	6328		
Implementing Partner:	UNDP CO in Somalia		

Atlas Activity (GEF Component)	Atlas Implementing Agent (Responsible Party, IP or UNDP)	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Y-1 2021/2022 (USD)	Amount Y-2 2022/2023 (USD)	Amount Y-3 2023/2024 (USD)	Amount Y-4 2024/2025 (USD)	Total (USD)	See Budget Note:
COMPONENT 1: Policy and regulation	**UNDP**	**62000**	**GEF**	71200	International Consultants	$50,000	$40,000	$25,000	$25,000	$140,000	*1*
				71300	Local Consultants	$40,000	$20,000	$20,000	$20,000	$100,000	*2*
				71400	Contractual services - Individuals	$50,000	$ -	$ -	$ -	$50,000	*3*
				72100	Contractual Services - Companies	$50,000	$50,000	$50,000	$50,000	$200,000	*4*
				75700	Training, workshop, conference	$20,000	$20,000	$20,000	$20,000	$80,000	*5*
				71600	Travel	$15,000	$10,000	$10,000	$9,425	$44,425	*6*
					sub-total GEF	**$225,000**	**$140,000**	**$125,000**	**$124,425**	**$614,425**	
					Total Component 1	**$225,000**	**$140,000**	**$125,000**	**$124,425**	**$614,425**	
COMPONENT 2: Business Model innovation with private sector engagement	**UNDP**	**62000**	**GEF**	71200	International Consultants	$50,000	$40,000	$20,000	$10,000	$120,000	*7*
				71300	Local Consultants	$30,000	$20,000	$20,000	$10,000	$80,000	*8*
				72300	Material & Goods	$ -	$1,000,000	$595,096	$ -	$1,595,096	*9*
				72100	Contractual Services - Companies	$50,000	$30,000	$15,000	$10,000	$105,000	*10*

				75700	Training, workshop, conference	$10,000	$10,000	$20,000	$20,000	$60,000	*11*
				71600	Travel	$5,000	$5,000	$5,000	$3,244	$18,244	*12*
					sub-total GEF	**$145,000**	**$1,105,000**	**$675,096**	**$53,244**	**$1,978,340**	
		4000	**UNDP**	72300	Material & Goods	$ -	$ -	200,000	200,000	400,000	*13*
				72100	Contractual Services - Companies	$ -	$ -	50,000	38,500	88,500	*14*
					sub-total UNDP	**$ -**	**$ -**	**250,000**	**238,500**	**488,500**	
					Total Component 2	**$145,000**	**$1,105,000**	**$925,096**	**$291,744**	**$2,466,840**	
COMPONENT 3: Scaled-up financing	**UNDP**	**62000**	**GEF**	71200	International Consultants	$40,000	$30,000	$20,000	$20,000	$110,000	*15*
				71300	Local Consultants	$30,000	$20,000	$15,000	$15,000	$80,000	*16*
				75700	Training, workshop, conference	$10,000	$10,000	$20,000	$20,000	$60,000	*17*
				71600	Travel	$5,000	$5,000	$3,000	$3,378	$16,378	*18*
					sub-total GEF	**$85,000**	**$65,000**	**$58,000**	**$58,378**	**$266,378**	
					Total Component 3	**$85,000**	**$65,000**	**$58,000**	**$58,378**	**$266,378**	
ONENT 4: , Knowledge ement (KM) and ring & tion (M&E)	**UNDP**	**62000**	**GEF**	72100	Contractual services - Companies	$ -	$1,500	$1,500	$2,000	$5,000	*19*
				72100	Contractual Services - Companies	$15,000	$15,000	$10,000	$10,000	$50,000	*20*
				75700	Training, workshop, conference	$6,000	$6,000	$6,000	$6,997	$24,997	*22*
				71600	Travel	$2,500	$7,500	$2,500	$7,500	$20,000	*23*
					sub-total KM	**$23,500**	**$30,000**	**$20,000**	**$26,497**	**$99,997**	
				71200	International Consultants	$ -	$50,000	$ -	$50,000	$100,000	*a*
				71300	Local Consultants	$2,500	$22,500	$2,500	$22,500	$50,000	*b*
				71400	Contractual services - Individuals	$1,500	$1,500	$1,500	$1,500	$6,000	*21*

				75700	Training, workshop, conference	$5,000	$ -	$ -	$ -	$5,000	*21*
					sub-total M&E	**$9,000**	**$74,000**	**$4,000**	**$74,000**	**$161,000**	
					sub-total GEF	**$32,500**	**$104,000**	**$24,000**	**$100,497**	**$260,997**	
		4000	**UNDP**	71400	Contractual services - Individuals	$34,500	$69,000	$69,000	$69,000	$241,500	*24*
					sub-total UNDP	**$34,500**	**$69,000**	**$69,000**	**$69,000**	**$241,500**	
					Total Component 4	**$67,000**	**$173,000**	**$93,000**	**$169,497**	**$502,497**	*c*
Project Management Costs (PMC)	**UNDP**	**62000**	**GEF**	71200	International Consultants	$6,000	$6,000	$6,000	$6,000	$24,000	*25*
				71400	Contractual services - Individuals	$29,520	$29,520	$29,520	$29,520	$118,080	*26*
				72400	Communication	$1,350	$1,350	$1,350	$1,350	$5,400	*27*
				72500	Supplies	$1,000	$1,000	$1,000	$1,000	$4,000	*28*
				72800	IT Equipment	$1,750	$950	$950	$877	$4,527	*29*
					sub-total GEF	**$39,620**	**$38,820**	**$38,820**	**$38,747**	**$156,007**	
		4000	**UNDP**	74100	Professional services	$5,000	$5,000	$5,000	$5,000	$20,000	*d*
					sub-total UNDP	**$5,000**	**$5,000**	**$5,000**	**$5,000**	**$20,000**	
					Total Project Management	**$44,620**	**$43,820**	**$43,820**	**$43,747**	**$176,007**	
					SUB-TOTAL GEF	**527120**	**$1,452,820**	**$920,916**	**$375,291**	**$3,276,147**	
					SUB-TOTAL UNDP	**39500**	**74,000**	**$324,000**	**$312,500**	**$750,000**	
					PROJECT TOTAL	**566620**	**$1,526,820**	**$1,244,916**	**$687,791**	**$4,026,147**	

Summary of Funds:

	Amount Year 1 2021/2022	Amount Year 2 2022/2023	Amount Year 3 2023/2024	Amount Year 4 2024/2025	Total (USD)
GEF grant administered by UNDP	$ 527,120	$ 1,452,820	$ 920,916	$ 375,291	$ 3,276,147
Grant co-finance by GEF Agency: UNDP	$ 39,500	$ 74,000	$ 324,000	$ 312,500	$ 750,000
In-kind co-finance by Government: MoEWR	$ 875,000	$ 875,000	$ 875,000	$ 875,000	$ 3,500,000

Grant co-finance by Development Partners: World Bank (WB)	$ 39,300,000	$ 39,300,000	$ 39,300,000	$ 39,300,000	$ 157,200,000
Grant co-finance by Development Partners: SIDA	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 10,000,000
Total	**$ 43,241,620**	**$ 44,201,820**	**$ 43,919,916**	**$ 43,362,791**	**$ 174,726,147**

Budget note number	**Comments:** Budget note should be output based rather than input based. Even for individual consultants' outputs of the consultants must be clear. Include cost breakdown and calculation basis (e.g. daily fee and number of days/weeks, unit cost and number), as well as a total amount for the budget line.
a	Since this is a full-size project, USD 50,000 has been allocated for an independent lead consultant to undertake the mid-term review and USD 50,000 for an independent lead consultant to undertake the terminal evaluation.
b	Fees for Local Consultants involved in M&E procedure. This includes: - MTR and TE visits: Since this is a full-size project, USD 20,000 has been allocated for an independent national consultant to undertake the mid-term review and USD 20,000 for an independent national consultant to undertake the terminal evaluation. - SES and Gender Officer(s), responsible for developing the project's ESAP, in line with the project's ESMF, and conducting quarterly monitoring visits to project sites to ensure compliance with SES requirements and efficient implementation of the Gender Action Plan ($2,500/year over 4 years, costing about USD 10,000).
c	The total amount includes the M&E budget included in Section VI.
d	An estimated audit cost of USD 5,000 a year has been allocated by the UNDP CO – as recommended in the latest template for UNDP Project Documents.
1	Fees for International Consultants involved in the work under Component 1. This includes: - Mini-grid Policy and Regulations Expert ($500/week for 26 weeks/year over 4 years, costing about USD 52,000), - Organizational Development and Institutional Capacity Building Expert ($500/week for 30 weeks/year over 4 years, costing about USD 60,000), and - Technical Standards and Quality Control Expert ($500/week for 28 weeks/year over 2 years, costing about USD 28,000).
2	Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 1. This includes: - Mini-grid Policy and Regulations Specialist ($280/week for 23 weeks/year over 4 years, costing about USD 25,760), - Communication Specialists with experience in the Energy Sector ($230/week for 52 weeks/year over 4 years, costing about USD 47,840), and - Training Facilitators and Capacity Building Specialists with background in Energy Policy ($225/week for 26 weeks/year over 4 years, costing about USD 23,400).
3	Fees for contracting national and international consultants to conduct the initial full quantitative national DREI analysis.
4	Fees for Professional Services contract to support the project team with digital transformation activities. The team will include international digital transformation experts and as well as local software developers and frontend designers. The amount also includes the purchase of licenses for tracking systems and online platforms, as appropriate.
5	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 1. The amount includes budget allocation for DREI dissemination activities (e.g. workshops, round tables, etc.) towards the end of Year 1 and in Year 2.
6	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 1. This includes $8,000 as travel budget for international DREI consultant to go on mission twice during Year 1.
7	Fees for International Consultants involved in the work under Component 2. This includes: - Hybrid Mini-grid Design Experts ($600/week for 30 weeks/year over 4 years, costing about USD 72,000), and - Mini-grid Education and Vocational Training Expert ($500/week for 24 weeks/year over 4 years, costing about USD 48,000).
8	Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 2. This includes: - Mini-grids Local Engineers ($300/week for 35 weeks/year over 4 years, costing about USD 42,000),

Budget note number	**Comments:** Budget note should be output based rather than input based. Even for individual consultants' outputs of the consultants must be clear. Include cost breakdown and calculation basis (e.g. daily fee and number of days/weeks, unit cost and number), as well as a total amount for the budget line.
	- Procurement and Logistics Specialist and Legal Advisors ($200/week for 32 weeks/year over 2 years, costing about USD 12,800), and - Training Facilitators and Capacity Building Specialists with Engineering background ($225/week for 28 weeks/year over 4 years, costing about USD 25,200).
9	The investment budget for the purchase of system components for the pilot project(s). Detailed procurement plans will be developed during Year 1 of implementation when further studies are conducted, and the exact location and system capacity are identified.
10	Fees for Professional Services contract to support the project team with conducting market research and associating studies. The studies include conducting needs assessment and community surveys at the selected sites for the pilot project(s), as well as private sector mapping on the national level and needs assessment for ESPs to define the technical gaps which the academic certification programme should address, and the commercial gaps with the mini-grid industry associations should focus on.
11	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 2.
12	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 2.
13	The investment budget for the purchase of system components for the pilot project(s). Detailed procurement plans will be developed during Year 1 of implementation when further studies are conducted, and the exact location and system capacity are identified.
14	Fees for Professional Services contract to support the project team with conducting market research and associating studies. The studies include conducting needs assessment and community surveys at the selected sites for the pilot project(s), as well as private sector mapping on the national level and needs assessment for ESPs to define the technical gaps which the academic certification programme should address, and the commercial gaps with the mini-grid industry associations should focus on.
15	Fees for International Consultants involved in the work under Component 3. This includes: - Financial Market Analysis and Financing Mechanisms Development Experts ($500/week for 38 weeks/year over 4 years, costing about USD 76,000), and - Investor Relations and Capacity Building Expert ($500/week for 34 weeks/year over 2 years, costing about USD 34,000).
16	Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 3. This includes: - Energy Finance Specialist ($320/week for 34 weeks/year over 4 years, costing about USD 43,520), - Communication Specialists with experience in the Finance Sector ($230/week for 32 weeks/year over 3 years, costing about USD 22,080), and - Training Facilitators and Capacity Building Specialists with background in Finance ($225/week for 32 weeks/year over 2 years, costing about USD 14,400).
17	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 3.
18	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 3.
19	Fees for hiring of a local firm for data collection and development of communications content (including photos and/or video footage) for the preparation of an 'insight brief' capturing (in an accessible format) selected key highlights from successful national project activities. This insight brief will be developed in a standard format provided by the AMP Regional Project. The AMP Regional Project will also support the dissemination of the Insight Briefs developed by the national AMP projects.
20	Fees for Professional Services contract to support the project team with the design and implementation of effective KM, M&E, and QA systems and procedures. This includes the development of templates for the team to use in reporting, as well as the design of suitable surveys in English and other local languages, as appropriate. This budget also includes carrying out specific national-level activities that can contribute to the AMP program and link up with the AMP regional project's activities, noting that this will not involve any transfer to the regional child project, but will simply cover national child project costs.
21	Costs for the activities performed under GEF M&E requirements, specifically the costs allocated for conducting the inception workshop and implementing the project's GRM. The summation of this item and the fees for international and local consultants (contracted to perform MTR and TE), and the fees for the Local SES and Gender Officer(s), presents the total M&E budget detailed in Section VI.
22	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 4.

Budget note number	**Comments:** Budget note should be output based rather than input based. Even for individual consultants' outputs of the consultants must be clear. Include cost breakdown and calculation basis (e.g. daily fee and number of days/weeks, unit cost and number), as well as a total amount for the budget line.
23	- Travel expenses for missions conducted by international consultants contracted to perform activities under Component 4. - The amount also includes USD 2,500 per year for travel expenses related to the projects participation in the meetings organized by the Communities of Practice (CoP) to be led by the AMP Regional Project. The location of these events will be confirmed by the AMP Regional Project during implementation, but the budget is expected to cover the expenses required for at least one member of the PMU to attend in-person at least one CoP meeting per year.
24	Project Oversight Support (Full-time employment at a rate of $2,800/month for 4 years, costing about USD 134,400) from UNDP co-finance budget UNDP Regional Staff to support the project implementation and learning documentation in the region (Part-time inputs at the rate of $ 2,231.25/month for 4 years, costing about USD 107,100) from UNDP co-finance budget
25	Fees for hiring an international Lead Technical Advisor to support the PMU on project implementation ($600/week for 10 weeks/year over 4 years, costing about USD 24,000)
26	Budget for hiring local staff for the PMU. This includes: - Project Manager (PM) (Full-time employment at a rate of $1,740/month for 4 years, costing about USD 83,520), - Project Accountant/Finance Assistant/Finance officer ($180/week for 24 weeks/year over 4 years, costing about USD 17,280), and - Project Monitoring & Evaluation Officer ($180/week for 24 weeks/year over 4 years, costing about USD 17,280).
27	Communication expenses by the project team.
28	Office supplies and stationery for the project team.
29	Software, computers, and IT tools for the project team.

X. LEGAL CONTEXT

Option a. Where the country has signed the Standard Basic Assistance Agreement (SBAA)

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of **Somalia** and UNDP, signed on **31 May 1977**. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by **UNDP Country Office in Somalia** ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XI. RISK MANAGEMENT

Option b. UNDP (DIM)

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)

2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the [project funds][22] [UNDP funds received pursuant to the Project Document][23] are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

3. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

4. UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse ("SEA") and sexual harassment ("SH") allegations in accordance with its regulations, rules, policies and procedures.

6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

7. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor and sub-recipient:

    a. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP's property in such responsible party's, subcontractor's and sub-recipient's custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
        i. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
        ii. assume all risks and liabilities related to such responsible party's, subcontractor's and sub-recipient's security, and the full implementation of the security plan.

    b. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party's, subcontractor's and sub-recipient's obligations under this Project Document.

22 To be used where UNDP is the Implementing Partner
23 To be used where the UN, a UN fund/programme or a specialized agency is the Implementing Partner

c. In the performance of the activities under this Project, UNDP as the Implementing Partner shall ensure, with respect to the activities of any of its responsible parties, sub-recipients and other entities engaged under the Project, either as contractors or subcontractors, their personnel and any individuals performing services for them, that those entities have in place adequate and proper procedures, processes and policies to prevent and/or address SEA and SH.

d. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

e. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

f. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation, and granting access to its (and its consultants', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.

g. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

   Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). It will provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

h. UNDP will be entitled to a refund from the responsible party, subcontractor or sub-recipient of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of this Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail any responsible party's, subcontractor's or sub-recipient's obligations under this Project Document.

   Where such funds have not been refunded to UNDP, the responsible party, subcontractor or sub-recipient agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to such responsible party, subcontractor or sub-recipient for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

i. Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.

j. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

k. Each responsible party, subcontractor and sub-recipient shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, *mutatis mutandis*, in all its sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

1. GEF Budget Template
2. GEF Execution Support Letter
3. Project Map and geospatial coordinates of the project area
4. Multiyear Workplan
5. Monitoring Plan
7. UNDP Atlas Risk Register
8. Overview of technical consultancies/subcontracts
14. GEF Core indicators
15. GEF 7 Taxonomy

Separate Annexes – included as part of the Project Document and submission package to the GEF:

6. Social and Environmental Screening Procedure (SESP)
9. Stakeholder Engagement Plan (SEP)
10. Environmental and Social Management Framework (ESMF)
11. Gender Analysis and Gender Action Plan (GAP)
12. GHG emissions reduction calculation
13. Additional agreements:

    Annex 13-1: Letter of co-finance by the UNDP

    Annex 13-2: Letter of co-finance by Ministry of Energy and Water Resources (MoEWR), Federal Government of Somalia

    Annex 13-3: Letter of co-finance by the World Bank (WB)

    Annex 13-4: Letter of co-finance by SIDA

Annex 1: GEF Budget Template

Expenditure Category	Detailed Description	Component (USDeq.)							Total (USDeq.)	Responsible Entity
		Component 1	*Component 2*	*Component 3*	*Component 4*	*Sub-Total*	*M&E*	*PMC*		(Executing Entity receiving funds from the GEF Agency)[1]
Equipment	The investment budget for the purchase of system components for the pilot project(s). Detailed procurement plans will be developed during Year 1 of implementation when further studies are conducted, and the exact location and system capacity are identified.		1,595,096			1,595,096			1,595,096	UNDP CO in Somalia
Equipment	Communication expenses by the project team.					-		5,400	5,400	UNDP CO in Somalia
Equipment	Software, computers, and IT tools for the project team.					-		4,527	4,527	UNDP CO in Somalia
Contractual services-Individual	Budget for hiring local staff for the PMU. This includes: - Project Manager (PM) (Full-time employment at a rate of $1,740/month for 4 years, costing about USD 83,520),- Project Accountant/Finance Assistant/Finance officer ($180/week for 24 weeks/year over 4 years, costing about USD 17,280), and- Project Monitoring & Evaluation Officer ($180/week for 24 weeks/year over 4 years, costing about USD 17,280).					-		118,080	118,080	UNDP CO in Somalia

Contractual services-Individual	Costs for the activities performed under GEF M&E requirements, specifically the costs allocated for conducting the inception workshop and implementing the project's GRM. The summation of this item and the fees for international and local consultants (contracted to perform MTR and TE), and the fees for the Local SES and Gender Officer(s), presents the total M&E budget detailed in Section VI.					-	6,000		6,000	UNDP CO in Somalia
Contractual services-Individual	Fees for contracting national and international consultants to conduct the initial full quantitative national DREI analysis.	50,000				50,000			50,000	UNDP CO in Somalia
Contractual services-Company	Fees for hiring of a local firm for data collection and development of communications content (including photos and/or video footage) for the preparation of an 'insight brief' capturing (in an accessible format) selected key highlights from successful national project activities. This insight brief will be developed in a standard format provided by the AMP Regional Project. The AMP Regional Project will also support the dissemination of the Insight Briefs developed by the national AMP projects.				5,000	5,000			5,000	UNDP CO in Somalia
Contractual services-Company	Fees for Professional Services contract to support the project team with conducting market research and associating studies. The studies include conducting needs assessment and community surveys at the selected sites for the pilot project(s), as well as private sector mapping on the national level and needs assessment for ESPs to define the technical gaps which the academic certification programme should address, and the commercial gaps with the mini-grid industry associations should focus on.		105,000			105,000			105,000	UNDP CO in Somalia

Contractual services-Company	Fees for Professional Services contract to support the project team with digital transformation activities. The team will include international digital transformation experts and as well as local software developers and frontend designers. The amount also includes the purchase of licenses for tracking systems and online platforms, as appropriate.	200,000				200,000			200,000	UNDP CO in Somalia
Contractual services-Company	Fees for Professional Services contract to support the project team with the design and implementation of effective KM, M&E, and QA systems and procedures. This includes the development of templates for the team to use in reporting, as well as the design of suitable surveys in English and other local languages, as appropriate. This budget also includes carrying out specific national-level activities that can contribute to the AMP program and link up with the AMP regional project's activities, noting that this will not involve any transfer to the regional child project, but will simply cover national child project costs.				50,000	50,000			50,000	UNDP CO in Somalia
International Consultants	Fees for hiring an international Lead Technical Advisor to support the PMU on project implementation ($600/week for 10 weeks/year over 4 years, costing about USD 24,000)					-		24,000	24,000	UNDP CO in Somalia
International Consultants	Fees for International Consultants involved in the work under Component 1. This includes:- Mini-grid Policy and Regulations Expert ($500/week for 26 weeks/year over 4 years, costing about USD 52,000), - Organizational Development and Institutional Capacity Building Expert ($500/week for 30 weeks/year over 4 years, costing about USD 60,000), and- Technical Standards and Quality Control Expert ($500/week	140,000				140,000			140,000	UNDP CO in Somalia

	for 28 weeks/year over 2 years, costing about USD 28,000).									
International Consultants	Fees for International Consultants involved in the work under Component 2. This includes:- Hybrid Mini-grid Design Experts ($600/week for 30 weeks/year over 4 years, costing about USD 72,000), and- Mini-grid Education and Vocational Training Expert ($500/week for 24 weeks/year over 4 years, costing about USD 48,000).		120,000			120,000			120,000	UNDP CO in Somalia
International Consultants	Fees for International Consultants involved in the work under Component 3. This includes:- Financial Market Analysis and Financing Mechanisms Development Experts ($500/week for 38 weeks/year over 4 years, costing about USD 76,000), and- Investor Relations and Capacity Building Expert ($500/week for 34 weeks/year over 2 years, costing about USD 34,000).			110,000		110,000			110,000	UNDP CO in Somalia
International Consultants	Since this is a full-size project, USD 50,000 has been allocated for an independent lead consultant to undertake the mid-term review and USD 50,000 for an independent lead consultant to undertake the terminal evaluation.					-	100,000		100,000	UNDP CO in Somalia

Local Consultants	Fees for Local Consultants involved in M&E procedure. This includes:- MTR and TE visits: Since this is a full-size project, USD 20,000 has been allocated for an independent national consultant to undertake the mid-term review and USD 20,000 for an independent national consultant to undertake the terminal evaluation. - SES and Gender Officer(s), responsible for developing the project's ESAP, in line with the project's ESMF, and conducting quarterly monitoring visits to project sites to ensure compliance with SES requirements and efficient implementation of the Gender Action Plan ($2,500/year over 4 years, costing about USD 10,000).					-	50,000		50,000	UNDP CO in Somalia
Local Consultants	Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 1. This includes:- Mini-grid Policy and Regulations Specialist ($280/week for 23 weeks/year over 4 years, costing about USD 25,760),- Communication Specialists with experience in the Energy Sector ($230/week for 52 weeks/year over 4 years, costing about USD 47,840), and- Training Facilitators and Capacity Building Specialists with background in Energy Policy ($225/week for 26 weeks/year over 4 years, costing about USD 23,400).	100,000				100,000			100,000	UNDP CO in Somalia
Local Consultants	Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 2. This includes:- Mini-grids Local Engineers ($300/week for 35 weeks/year over 4 years, costing about USD 42,000),- Procurement and Logistics Specialist and Legal Advisors ($200/week for 32		80,000			80,000			80,000	UNDP CO in Somalia

	weeks/year over 2 years, costing about USD 12,800), and- Training Facilitators and Capacity Building Specialists with Engineering background ($225/week for 28 weeks/year over 4 years, costing about USD 25,200).									
Local Consultants	Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 3. This includes:- Energy Finance Specialist ($320/week for 34 weeks/year over 4 years, costing about USD 43,520),- Communication Specialists with experience in the Finance Sector ($230/week for 32 weeks/year over 3 years, costing about USD 22,080), and- Training Facilitators and Capacity Building Specialists with background in Finance ($225/week for 32 weeks/year over 2 years, costing about USD 14,400).			80,000		80,000			80,000	UNDP CO in Somalia
Training, Workshops, Meetings	Costs for the activities performed under GEF M&E requirements, specifically the costs allocated for conducting the inception workshop and implementing the project's GRM. The summation of this item and the fees for international and local consultants (contracted to perform MTR and TE), and the fees for the Local SES and Gender Officer(s), presents the total M&E budget detailed in Section VI.					-	5,000		5,000	UNDP CO in Somalia
Training, Workshops, Meetings	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 1. The amount includes budget allocation for	80,000				80,000			80,000	UNDP CO in Somalia

	DREI dissemination activities (e.g. workshops, round tables, etc.) towards the end of Year 1 and in Year 2.									
Training, Workshops, Meetings	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 2.		60,000			60,000			60,000	UNDP CO in Somalia
Training, Workshops, Meetings	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 3.			60,000		60,000			60,000	UNDP CO in Somalia
Training, Workshops, Meetings	Expenditures for organizing consultation meetings, stakeholders' engagement conferences, capacity building workshops, and round table discussions, to support the implementation of activities under Component 4.				24,997	24,997			24,997	UNDP CO in Somalia
Travel	- Travel expenses for missions conducted by international consultants contracted to perform activities under Component 4. - The amount also includes USD 2,500 per year for travel expenses related to the projects participation in the meetings organized by the Communities of Practice (CoP) to be led by the AMP Regional Project. The location of these events will be confirmed by the AMP Regional Project during implementation, but the budget is expected to cover the expenses required for at least one member of the PMU to attend in-person at least one CoP meeting per year.				20,000	20,000			20,000	UNDP CO in Somalia
Travel	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 1. This includes $8,000 as travel budget	44,425				44,425			44,425	UNDP CO in Somalia

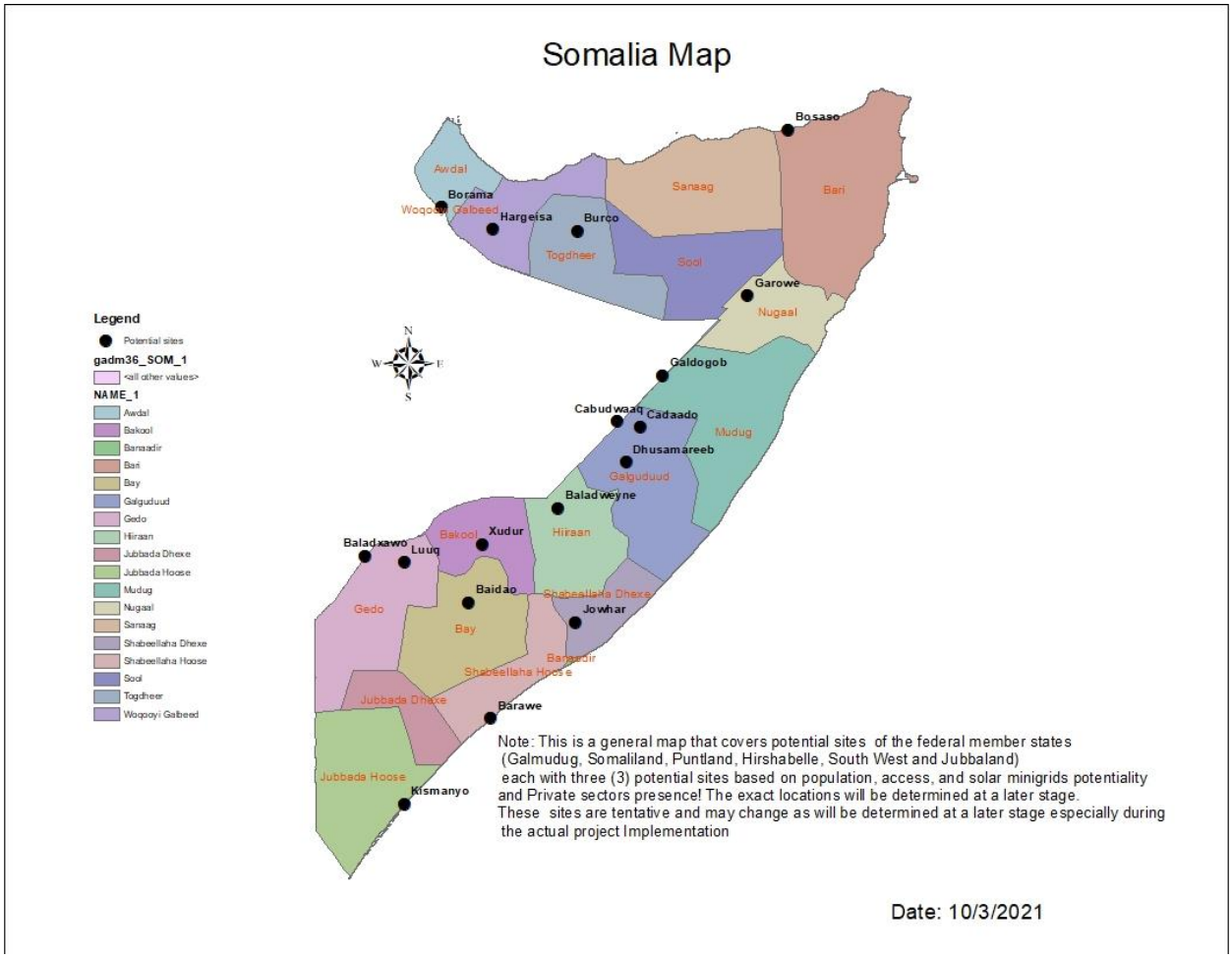
	for international DREI consultant to go on mission twice during Year 1.									
Travel	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 2.		18,244			18,244			18,244	UNDP CO in Somalia
Travel	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 3.			16,378		16,378			16,378	UNDP CO in Somalia
Office Supplies	Office supplies and stationery for the project team.					-		4,000	4,000	UNDP CO in Somalia
		614,425	**1,978,340**	**266,378**	**99,997**	**2,959,140**	**161,000**	**156,007**	**3,276,147**	

Annex 2: GEF execution support letter

Not applicable since the project is following a DIM modality, i.e. UNDP CO in Somalia is the Implementing Partner responsible for project execution.

Annex 3: Project map and Geospatial Coordinates of project sites

Source: https://www.un.org/Depts/Cartographic/map/profile/somalia.pdf


Somalia Map
Legend
Potential sites
gadm36_SOM_1
<all other values>
NAME_1
Awdal
Bakool
Banaadir
Bari
Bay
Galguduud
Gedo
Hiiraan
Jubbada Dhexe
Jubbada Hoose
Mudug
Nugaal
Sanaag
Shabeellaha Dhexe
Shabeellaha Hoose
Sool
Togdheer
Woqooyi Galbeed
N
W
E
S
Bosaso
Awdal
Borama
Woqooyi Galbeed
Hargeisa
Burco
Sanaag
Bari
Togdheer
Sool
Garowe
Nugaal
Galdogob
Cabudwaaq
Cadaado
Mudug
Dhusamareeb
Galguduud
Baladweyne
Hiiraan
Baladxawo
Luuq
Bakool
Xudur
Baidao
Gedo
Bay
Shabeellaha Dhexe
Jowhar
Banaadir
Shabeellaha Hoose
Jubbada Dhexe
Barawe
Jubbada Hoose
Kismanyo
Note: This is a general map that covers potential sites of the federal member states
(Galmudug, Somaliland, Puntland, Hirshabelle, South West and Jubbaland)
each with three (3) potential sites based on population, access, and solar minigrids potentiality
and Private sectors presence! The exact locations will be determined at a later stage.
These sites are tentative and may change as will be determined at a later stage especially during
the actual project Implementation
Date: 10/3/2021

Annex 4: Multi Year Work Plan

Financial mechanism and de-risking

Delivery model and pilot project(s)

Institutional and individual capacity building

M&E, QA and KM

Components	Outcomes	Outputs	Year 1 (2022/23)				Year 2 (2023/2024)				Year 3 (2024/2025)				Year 4 (2025/26)			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Policy and regulation	**Outcome 1: Stakeholder ownership in a national mini-grid delivery model is advanced, and appropriate policies and regulations are adopted to facilitate investment in low-carbon mini-grids.**	1.1. An inclusive national dialogue to identify mini-grid delivery models is facilitated, clarifying priority interventions for an integrated approach to off-grid electrification.																
		1.2. Mini-grid DREI techno-economic analyses carried out to propose most cost-effective basket of policy and financial de-risking instruments and contribute to AMP Flagship Report on cost reduction.																
		1.3. Mini-grid policies and regulations, including tariff model and incentives, are operationalized through digital transformation support, in collaboration with the authorities and other development partners.																
		1.4. Institutional setup for rural electrification assessed and supported, and institutional capacity building provided on technical, managerial, and regulatory issues.																
		1.5. Quality standards for solar and hybrid mini-grid components domesticated, and institutional capacity of Somali Bureau of Standards (SBS) and Somaliland Quality Control Commission (SQCC) strengthened.																
Component 2: Business Model innovation with private sector engagement	**Outcome 2: Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini-grid development.**	2.1. Pilot(s) developed using innovative business models through calls for proposals based on lessons learned from the operationalization of the SREF under ESRES2 and the results of the geospatial mapping by SEAP.																
		2.2. Public programmes (apprenticeships, certificates, university programs) to develop competitive, skilled labor market in the design, O&M, and management of solar and hybrid mini-grids, including technical training on the utilization of online tools for performance monitoring, consumption tracking and billing.																

Components	Outcomes	Outputs	Year 1 (2022/23)				Year 2 (2023/2024)				Year 3 (2024/2025)				Year 4 (2025/26)			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		2.3. Support provided to establish, grow and capacitate national industry associations for private sector developers and ESPs.																
Component 3: Scaled-up financing	**Outcome 3: Financial sector actors are ready to invest in a pipeline of low-carbon mini-grids and concessional financial mechanisms are in place to incentivize scaled-up investment.**	3.1. Design support, including development of operational guidance, for a complementary funding instrument through which the diaspora and small investors can participate in existing financing mechanisms that have been introduced by other development partners to facilitate finance for vetted mini-grid projects.																
		3.2. Domestic financial sector capacity building on business and financing models for mini-grids.																
Component 4: Digital, Knowledge Management (KM) and Monitoring and Evaluation (M&E)	**Outcome 4: Digital and data are mainstreamed, across stakeholders, into local mini-grid market development. Increased knowledge, awareness and network opportunities in the mini-grid market and among stakeholders, including benefitting from linkages to international good practice.**	4.1. A Digital Strategy is developed and implemented, including linkages to and following guidance from, the AMP Regional Project.																
		4.2. Mini-grids digital platform implemented to run tenders and manage data from pilot(s), and to support mini-grids scale-up and cost-reduction.																
		4.3. A Quality Assurance and Monitoring Framework (QAMF) for measuring, reporting and verification of the sustainable development impacts of all mini-grid pilot(s) supported, including GHG emission reductions, is adopted and operationalized based on standardized guidance from the AMP Regional Project.																
		4.4. M&E and Reporting, including (i) Conducting inception workshop and preparing report, (ii) Ongoing M&E, (iii) Mid-term Review (MTR), and (iv) Terminal Evaluation (TE).																
		4.5. Engage with the AMP Regional Project, including, but not limited to, via (i) Participating in Communities of Practice (CoPs), and (ii) Capturing and sharing lessons learnt.																

Annex 5: Monitoring Plan

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project Objective: Supporting access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low carbon mini grids in Somalia, with a focus on cost reduction levers and innovative business models.	*Mandatory Indicator 1: GEF Core indicator 11* Number of direct beneficiaries benefitting from clean, affordable and sustainable energy access via mini-grids, disaggregated by gender and by customer segment (residential, social, commercial/productive use)	**Mid-term Target:** Zero, since the pilot project(s) is not yet commissioned. **End of Project Target:** 66,670 people (of which 50 % women) ------- 65,570 people (residential) 210 people (social) 710 people (commercial/PUE) ***66,670 people (total)***	The targets reflect the direct beneficiaries targeted by outcomes involving the project pilot(s), as well as other workshops and events. Indirect beneficiaries include the population benefiting from increasing the financial viability and commercial investments in the mini-grid sector.	Overall reporting by consultants in charge of different outcomes, especially those involving pilot(s) implementation, training, surveys, or direct participation by individuals. Pilots will share data with the project which will be aggregated at a national and regional level using a data management platform.	Annually	Project M&E Officer, under the UNDP CO.	- Installation and commissioning reports for pilot project(s). - Survey forms, attendance sheets for training workshops, and certifications issued to participants. - QA Reports. - Data management platform	The main risk facing effective reach out to direct beneficiaries is that several of these outcomes rely on additional assessments and studies to be conducted during Year 1 of project implementation. The project can mitigate this risk by following the project timeline as closely as possible.
	Mandatory Indicator 2: GEF Core indicator 6 GHG emissions mitigated (metric tons of carbon dioxide equivalent; tCO_2e)	**Mid-term Target:** Zero, since the pilot project(s) is not yet commissioned. **End of Project Target:** Direct: 29,577 tCO_2eq Indirect: 594,000 tCO_2eq (90% of the total estimation for this project)	GHG emissions mitigation will be achieved by the installation of solar PV mini-grids.	Consumption data from the monitoring systems installed to the project pilot(s).	Annually	Project M&E Officer, under the UNDP CO.	- Installation and commissioning reports for pilot project(s), especially in relation to installed capacity and	The main risk facing these indicators is that the baseline data and assumptions used to estimate existing capacity and GHG emissions maybe inaccurate or

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	Indicator 3: GEF Sub-Indicator 6.4 Increase in installed renewable energy capacity per technology (in MW)	**Mid-term Target:** Zero, since the pilot project(s) is not yet commissioned. **End of Project Target:** Installed capacity of solar PV: 2.093 MW	The pilot project(s) involve the installation of solar PV and hybrid mini-grids.	Data on installed capacity from progress reports, QA audits and third-party evaluation.	Annually	Project M&E Officer, under the UNDP CO.	generated power. - M&E systems developed under Outcome 4. - QA Reports.	incomplete. The project aims to mitigate this by: (1) conducting further assessments during Year 1; and (2) establish a focal point as an entity able to track such data on regular basis.
	Indicator 4: Number of local residents trained in different aspects of mini-grid development and operation (e.g. sales, distribution, operations, management) disaggregated by gender	**Mid-term Target:** Female: 60 Male: 90 Total: 150 persons **End of Project Target:** Female: 120 Male: 180 Total: 300 persons	In addition to the supply of electricity through the pilot project(s), the project aims to enhance the capacity of local residents to engage in the mini-grid sector. Every training workshop will have a survey form to assess the effectiveness of the activities performed, such that the quality of training can also be assessed.	- Reports submitted by the Consultants engaged in capacity building activities. - Records of training attendance.	Annually	Project M&E Officer, under the UNDP CO.	- Surveys filled by participants and trainees. - Handbooks developed for training workshops. - SEP and Gender-related reports. - QA Report.	It is assumed that every year, at least one training workshop for local residents in the pilot location(s) will be conducted. In case of COVID restrictions, training sessions will be conducted online. This poses a risk on inclusivity, which will be mitigated by conducting additional in-person training for small groups as needed.
Outcome 1: Stakeholder ownership in a national mini-grid delivery model is advanced, and appropriate policies and regulations are adopted to	*Indicator 5:* Number of policy derisking instruments for minigrid investments identified and endorsed by the national government	**Mid-term Target:** A full quantitative DREI application is conducted. **End of Project Target:** DREI analyses refreshed to track evolutions in financing costs as well as in hardware and soft costs and presented for government endorsement.	The targets present the three main stages of performing the DREI analyses, i.e. conducting the analyses, engaging with stakeholders, and updating the report during Year 4 to obtain	- Reports submitted by the Consultants engaged in conducting the analyses. - Records of consultation workshops.	Annually	Project M&E Officer, under the UNDP CO.	– Mission reports. - QA Report.	From an operational perspective, it is envisioned that these national light quantitative DREI analyses will be centralized, and administered and performed by the AMP Regional Project.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
facilitate investment in low-carbon mini-grids.			government endorsement.					
	Indicator 6 (a): Online tools for digital transformation of the mini-grid sector are selected and adopted through a consultative process involving key stakeholders (e.g. relevant ministries, local authorities, rural populations, private sector, media, etc.)	**Mid-term Target:** Online tools are selected and consensus among public and private parties is achieved on their adoption as part of the proposed digital transformation activities. **End of Project Target:** The selected online tools are adopted and staff members in public authorities, including women, are capacitated to utilize them for sector monitoring.	The adoption of online tools aims to provide the Government with visibility on the mini-grid sector enabling them to strategize the development to increase energy access. The targets capture the stages of selection and adoption.	- Evidence of tool adoption. - Training material for staff members in public authorities.	Annually	Project M&E Officer, under the UNDP CO.	- Site visit to systems captured on the online tool. - Interviewing staff. - QA Report.	The main risk facing the achievement of this outcome is that the registration of mini-grid systems on the online tool during the AMP project implementation will be on voluntary basis and depend on the Government's ability to provide incentives.
	Indicator 6 (b): A minigrid delivery model and roadmap to enable minigrid development is endorsed/adopted through a consultative process involving key stakeholders (e.g. relevant ministries, local authorities, rural populations, private sector, media, etc.)	*Midterm* National Dialogue platform established and active. *End of project* At least one preferred minigrid delivery model is identified and endorsed through the work of the multi-stakeholder platform and dialogue. Minigrid Roadmap adopted, informed by National Dialogue and DREI analysis	Baseline: Technical Steering Committee (TSC) being created as part of PPG phase. TSC expected to form the basis of a National Dialogue on minigrids. Forum established and activities structured to collaborate, digest knowledge material (existing and developed by the project) and actively interface with regional project to formulate a vision and roadmap incorporating a selected business model(s) for the country.	Track knowledge material developed as outputs, National Dialogue meetings held, nominations for regional Community of Practice implemented and active interface established. Capacity building events hosted and attended. Roadmap and vision commissioned and developed. Chosen business model(s) identified. DREI analyses completed with complete set of standard outputs delivered at mid-	Annually Progress on key outputs tracked in PIR.	PMU and Implementing Partner as host / sponsor of the National Dialogue	Forum established, schedule planned and implemented, Outputs produced.	National Dialogue not engaged in the topic as anticipated and therefore unable to utilize the wealth of resources available through AMP to effectively shape the direction of MGs in Eswatini. Stakeholder participation not adequately representative to maximise the contribution of minigrids in the country. Outputs produced as tick boxes rather than as meaningful planning resources. Vision and roadmap not adequately cognizant of the country context.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
				term and update note delivered by project end.				
Outcome 2: Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini-grid development.	*Indicator 7:* Number of mini-grid pilot(s) implemented that demonstrate a delivery model, cost-reduction measure(s) and/or productive use of electricity (including data on the installed capacity, location coordinates, and commissioning date)	**Mid-term Target:** Target to be identified during the site selection and pilot(s) design activities in Year 1, with the capacity and procurement plan finalized and documented in the project's MTR report. **End of Project Target:** Low-carbon mini-grid pilot(s) are installed and commissioned, with the capacities confirmed during Year 1.	The demonstration pilot(s) are developed to showcase the proposed delivery model and promote private sector engagement in its roll-out. Targets represent the pilot(s) preparations (through the development of the procurement plan), followed by installation and commissioning before project end.	- Procurement Plan developed during Year 1 of AMP project implementation. - Reports submitted by the Consultants engaged in pilot(s) planning and implementation. - User manuals for purchased equipment. - First Inspection Report issued by the focal point established under Outcome 1.	Annually	Project M&E Officer, under the UNDP CO.	- The pilot project(s) exist, with documents showing evidence of equipment purchase and ownership. - Interviewing beneficiaries of the generated electricity. - Reports of site visits to pilot location(s). - QA Report.	The main risk associating this outcome is that the pilot location(s) are yet to be selected based on additional data to be obtained from country-level mapping. The project will mitigate this risk by ensuring the timeline is followed such that more detailed site assessments, including needs assessment, are completed during Year 1 of implementation.
	Indicator 8: Capacity of mini-grid developers and/or operators is enhanced to implement innovative business models and incorporate cost-reduction levers in mini-grid projects	**Mid-term Target:** Partnership agreements are in place for the certification programme to operate through one or more of the educational institutions and vocational training facilities in Somalia and Somaliland. **End of Project Target:** Students are enrolled in the programme and have successfully completed the general courses and selected their specialty for graduation (obtaining certificates) at	The goal is to institutionalize capacity building in the mini-grid sector and have a national level certification programme combining what is presently offered in the form of scattered workshops with limited attendance and scope.	- Reports submitted by the Consultants engaged in capacity building activities. - Records of enrollment in the developed programmes.	Annually	Project M&E Officer, under the UNDP CO.	- Surveys filled by participants and students. - Handbooks developed for training courses. - SEP and Gender-related reports. - QA Report.	The default would be for the courses to be blended, with some in-person, some online and some on-site. In case of COVID restrictions, training sessions will be conducted online. This poses a risk on inclusivity, which will be mitigated by conducting additional in-person training for small groups on the

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
		project end - or the year after at the latest.						community level as needed.
Outcome 3: Financial sector actors are ready to invest in a pipeline of low-carbon mini-grids and concessional financial mechanisms are in place to incentivize scaled-up investment.	*Indicator 9:* Capacity of financial institutions is enhanced through training, knowledge sharing, and/or awareness raising events aimed at increasing the financial sector's capacity to evaluate investments in mini-grids	**Mid-term Target:** Two of the domestic financial institutions in Somalia and two in Somaliland take steps towards offering grants and/or loans for low carbon mini grid development. **End of Project Target:** Two ESPs in Somalia and two in Somaliland have managed to obtain finance for low-carbon mini-grid projects from domestic financial institutions.	Training under Outcome 3 focuses on financial institutions to enable resource mobilization for pilot(s) replication beyond the project lifetime. Every training workshop will have a survey form to assess the effectiveness of the activities performed, such that the quality of training can also be assessed.	- Reports submitted by the Consultants engaged in capacity building activities. - Records of training attendance.	Annually	Project M&E Officer, under the UNDP CO.	- Surveys filled by participants and trainees. - Handbooks developed for training workshops. - SEP and Gender-related reports. - QA Report.	It is assumed that every year, at least one training workshop will be conducted. In case of COVID restrictions, training sessions will be conducted online. This poses a risk on inclusivity, which will be mitigated by conducting additional in-person training for small groups on the community level as needed.
	Indicator 10: Number of government or impact investor-supported financing mechanisms offering concessional finance for low-carbon mini-grids	**Mid-term Target:** At least one complementary funding instrument is designed to support the participation of the diaspora and small investors in existing financing mechanisms. **End of Project Target:** Two ESPs in Somalia and two in Somaliland have managed to obtain finance for low-carbon mini-grid projects from the diaspora or small investors.	This indicator focuses on the project's ability to engage financial institutions in funding future solar and hybrid min-grid projects. The targets reflect the design of a financing mechanism and its adoption by financial institutions.	- Reports submitted by the Consultants engaged in the design of the financing mechanism. - Relevant agreements for new projects.	Annually	Project M&E Officer, under the UNDP CO.	- Handbook developed to introduce the financing mechanism to financial institutions and private companies. - QA Report.	It is assumed that the designed mechanism will be in line with national regulations governing the receipt of loans and equity investment in Somalia, Puntland and Somaliland, and that the diaspora and domestic investors gain interest in the mini-grid market.
Outcome 4: Digital and data are	*Indicator 11:* A digital strategy for the project is prepared	**Mid-term Target:** Digital strategy is prepared, in consultation with public and	AMP Core Team to provide standard	AMP Core Team to provide standard text for	Annually	Project M&E Officer,	AMP Core Team to provide standard text for	AMP Core Team to provide standard text

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
mainstreamed, across stakeholders, into local mini-grid market development. Increased knowledge, awareness and network opportunities in the mini-grid market and among stakeholders, including benefitting from linkages to international good practice.	and implemented by the relevant PMU to contribute to project implementation and local mini-grid market development	private parties, and close collaboration with the CoPs led by the AMP Regional Project. **End of Project Target:** The strategy is implemented and staff members in public authorities, including women, are capacitated to utilize the associating tools and reporting procedure.	text for all national child projects	all national child projects		under the UNDP CO.	all national child projects	for all national child projects
	Indicator 12: Number of mini-grid pilot(s) sharing data on mini-grid performance with the regional project and other stakeholders following best practices and guidance provided by the AMP Regional Project	**Mid-term Target:** A reporting procedure is developed, and the pilot project(s) have sensors installed to measure baseline performance and consumption data, in close collaboration with the CoPs led by the AMP Regional Project. **End of Project Target:** At least two quarterly reports, including data on performance monitoring and consumption tracking are prepared and shared with the AMP Regional Project.	AMP Core Team to provide standard text for all national child projects	AMP Core Team to provide standard text for all national child projects	Annually	Project M&E Officer, under the UNDP CO.	AMP Core Team to provide standard text for all national child projects	AMP Core Team to provide standard text for all national child projects

Annex 7: UNDP Risk Register

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
1	Continuing security risks due to armed conflicts, limiting the ability to mobilize personnel and equipment.	Security	Lack of security imposes restrictions on the mobility of people and goods. It also increases the risk of theft or damage, prohibiting the investment in equipment requiring upfront capital. *Level: High* *L = 4* *I = 5*	UNDP has been implementing many projects during the ISIS period between 2014 and 2017. The UNDP CO will follow the security arrangement of the UN mission in Somalia in accordance with the security regulations and policies of UNAMI and UNDSS. With regards to the investment in solar components and hybridization work, it has been agreed during the development of the Concept Note that the pilot project(s) will be situated in Somaliland, which had relatively higher security than other regions. Specific security arrangements for the pilot project(s), especially in relation to equipment transport and safeguarding, will be developed with the authorities and partnering ESPs as needed.	UNDP CO, in their capacity as the project's IP
2	Inability to maintain the political will required to undertake steps towards effective operationalization and upgrade the institutional setup of government's involvement in the mini-grid sector	Political	Without political will, operationalization will not be achieved regardless of the progress achieved on other project activities, which jeopardizes the project's sustainability. *Level: Substantial* *L = 3* *I = 4*	The PPG consultations involved discussions with the ministries of energy in Somalia, Somaliland, and Puntland. The stakeholders considered the AMP to be an important project, aligned with their national initiatives and collaboration with other development partners. During implementation, and in addition to overall stakeholder engagement, a clear output to work on the institutional arrangement has been added to the project strategy and another for establishing an industry association for mini-grid developers and ESPs. The mitigation of this risk, in case of occurrence, will be to redirect additional funds towards these two outputs as a way of maintaining government attention and dedication to solar and hybrid mini-grid development.	UNDP CO, in their capacity as the project's IP
3	Inability to translate the cost reduction to ESPs into tariff reduction for end-users	Strategic	In the absence of formal tariff regulations, the realization of social returns of the project is subject to ESPs' commitments to their agreements. *Level: Substantial* *L = 3* *I = 4*	The project starts with performing DREI techno-economic analyses, the result of which will include recommendations for de-risking measures. These measures can be adopted by the AMP team for pilot(s) implementation to ensure the cost-reduction is reflected on the end-user tariffs. Furthermore, the digital transformation approach is readily capable of detecting changes in tariff calculation and collection and providing end-users with channels to submit feedback and file complaints as needed. Hence, the pilot(s) design will already involve aspects of mitigation, with more to be added based on the findings of the DREI analyses.	UNDP CO, in their capacity as the project's IP

4	Persistence of COVID-19 until project start and/or throughout project implementation, and/or spread of similarly communicable diseases among the population.	Health	The implementation of the project during a pandemic can potentially lead to: - General reduction in the purchasing power of the population - Change in national priorities and context - Procurement delays due to restrictions on imports - Hindered communication due to COVID-19 - Exposure risks for the project team, consultants, partners, and communities during implementation *<u>Level:</u> Substantial* *L = 4* *I = 3*	The biggest risk of the COVID-19 to the AMP project has been the impact on the economy, which reduced the purchasing power of the population in general. According to the UNDP SEIA of COVID-19, it was reported early on that in general the electricity sector experienced negative outcome as consumption of electricity reduced due to failing demand, revenue collection was disrupted, suspension network expansion operations, a slowdown in daily operations and staff productivity and overall disruption in operations. This trend will have negative impact on the overall development of the sector especially in the clean energy sector as it is currently more capital intensive to invest in clean energy than diesel power. In addition, COVID-19 poses a challenge on communication and service delivery due to restrictions on in-country gatherings and international travel. In March 2020, the Government imposed restrictions in response to the COVID-19 pandemic, and the UN reduced its physical staff presence in response. The following mitigation measures were integrated in the project strategy to overcome and mitigate the influence of the above challenges on project operation: - Supporting the government with energy access goals readily supports COVID-19 responses by facilitating the stay-home conditions for people, and ensures more reliable energy access for health facilities. - Supporting digital transformation and promoting remote performance monitoring and consumption tracking serves to increase system efficiency while minimize in-person contact to ensure sustainability during pandemic emergencies without putting the different target groups at exposure risks. - In the work plan, site assessment for the pilot location(s) will be performed during Year 1 of project implementation. This will be accompanied by a procurement assessment exercise for the development of the project's procurement plan, such that the actual procurement of material and goods for the pilot project(s) can take place during Year 2. The activities involving procurement may be shifted further, as necessary, taking into consideration the 4 years implementation period. In addition, the project will focus on virtual activities whenever possible, including online consultation meetings and capacity building workshops. The project budget also allocates fees for national consultants to support international consultants on all components. This strategy aims to engage	UNDP CO, in their capacity as the project's IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
				national experts in project implementation to ensure its sustainability, but also to ensure continuity and enhance the ability of the project team to maintain the workflow whether the international consultants were able to conduct field missions, or carried home-based assignments to comply with travel restrictions in their home countries and/or in Somalia. Furthermore, the project team will follow UN and host country regulations in terms of social distancing and travel restrictions, abiding by WHO guidelines for preventive measures.[24] Despite the above-mentioned challenges, COVID-19 also presented an opportunity for solar mini-grid development, where the knowledge and awareness of the opportunities in the clean energy sector has increased significantly over the past 12 months. The Federal government is currently running a successful national campaign on public awareness of the benefits of solar clean energy as part of the Somalia Energy Access Project. Furthermore, during the pandemic, a number of large mini-grid projects ranging from 1MW to 7 MW hybrid were implemented in the country both by the private sector and by NGOs. A number of international clean energy companies from countries such as Italy, South Africa and the Netherlands have also entered agreements with large ESP. Some of the Banks are managing multimillion projects on clean energy as part of the eligible productive sector financing conditions.	
5	Lack of coordination amongst various stakeholders and partners involved in the mini-grid sector	Organizational	Without intra-government collaboration and consensus among stakeholders, the operationalization of regulations will be more challenging and less impactful. *Level: Moderate* *L = 2* *I = 4*	The AMP is designed to promote an inclusive strategy for developing the mini-grid sectors. Three outputs are dedicated to capacitate the public sector, private sector, and financial sectors and support them with self-organization, i.e. institutional setup, industry association, and capacity building for domestic financial institutions. With a well-defined chain of command on the government side, a recognized body to represent the interests of private parties, and clear operational guidance for financiers and investors, the coordination on mini-grid projects and sectoral development will be facilitated and decision-making processes will be more adaptive to the views of different parties. Furthermore, the digital transformation will also facilitate the engagement of communities and end-users and provide them with proper tools for knowledge sharing.	UNDP CO, in their capacity as the project's IP

[24] WHO (2020). Considerations for public health and social measures in the workplace in the context of COVID-19 (https://apps.who.int/iris/rest/bitstreams/1277575/retrieve)

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
6	Lack of private sector cooperation on project activities	Operational	Without private sector cooperation, no change can be expected in the Somali mini-grid sector. *Level: Moderate* *L = 2* *I = 4*	The private sector is *the* key player in the development of mini-grids in Somalia and is naturally inclined to reject regulations that could potentially reduce its ability to maximize profit. This could potentially be manifested in the form of refusal to participate in tenders that mandates a minimum threshold of co-finance or poses strict oversight on tariffs value and collection procedure. It may also come out in the form of a one-sided decision to discontinue the pilot systems before their lifetime (20 years) or intentional negligence in following the recommended O&M procedure, e.g. system cleaning, replacing equipment, etc. Enforcing laws without proper private sector engagement could lead to their withdrawal from the market. Therefore, the AMP will focus on promoting hybridization to ensure that ESPs can capitalize on their existing investments and are supported to achieve cost-reduction. Furthermore, the AMP adopts a step-wise approach towards regulations, where the introduction of new measures targeting digital transformation will start voluntarily with incentives, before they become mandatory in the long-term. In addition, emphasis is given to developing ESPs' capacities as project beneficiaries for several activities. In addition, the project will capitalize on the experience of the ESRES project financed by FCDO and the lessons learned by the team on how to best engage ESPs and provide collaboration modalities that are realistic and binding, while empower communities to hold ESPs accountable and ensure that the pilot systems are maintained to provide the service promised.	UNDP CO, in their capacity as the project's IP
7	ESPs are unable to afford contributing to financing the hybridization processes	Financial	Without direct investment, the realization of social returns of the project is subject to ESPs' commitments to their agreements. *Level: Moderate* *L = 2* *I = 4*	The AMP has a dedicated component for studying the financing mechanisms available and contributing to: (1) enhancing the clarity of the process of obtaining finance from existing sources such as smaller ESPs and new developers can seek finance for their projects, and (2) expanding the ability of financial institutions to mobilize resources from the diaspora and small investors.	UNDP CO, in their capacity as the project's IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
8	Climate risk: External environmental factors, like for example the effects of climate change (such as the volume and quality of rainfall, rising temperatures, floods, droughts, violent winds, earthquakes, landslides, severe winds, storm surges, tsunamis, volcanic eruptions…) could lead to delay or abandonment of the project.	Environmental	*Level: Moderate* L=3 I=3	This is an external risk to the project that will be mitigated in the context of a variety of other third-party activities from the Government. Furthermore, external environmental factors likely to be a risk will be considered within this project as part of the feasibility/assessment studies established in the ESMF for each site, which will use conservative assumptions to successfully operate. Therefore, this risk is assumed to be LOW under the assurance that this project will prepare the pertinent environmental studies as required in the ESMF.	UNDP CO, in their capacity as the project's IP
9	Potential negative environmental impacts resulting from the project, either routine or non-routine based, could lead to adverse local, regional, and/or transboundary impacts causing a delay or abandonment of it.	Environmental	*Level: Substantial* L=4 I=4	During Project preparation similar Project activities have been visited and/or consulted by the team of experts to evaluate the risks. Principal environmental risks have been framed at this stage (Project Preparation Grant, PPG) and they will continue to be assessed along the entire project cycle for each chosen site. Based on that, a pertinent due diligence project development process, monitoring of operations, and active intervention are foreseen according to such environmental safeguards established in this project through the ESMF to ensure operation within the established parameters and in compliance with the applicable regulations. This includes the environmental risks associated with the disposal of used batteries, solar panels, power converters, and other grid equipment during maintenance rounds and at the end of the project's lifetime. Therefore, this risk is assumed to the LOW under the assurance that this project will prepare the pertinent environmental studies as required in the ESMF.	UNDP CO, in their capacity as the project's IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
10	External social factors, like for example political unrest, COVID persistence, and other issues, could lead to delay, abandonment of the project, or decrease the ability of people to pay for the services.	Social	*Level: Substantial* L=4 I=4	This is an external risk to the project that will be mitigated in the context of a variety of other third-party activities from the Government. Furthermore, external social factors likely to be a risk will be considered within this project as part of the feasibility/assessment studies established in the ESMF for each site, which will use conservative assumptions to successfully operate. Therefore, this risk is assumed to be LOW under the assurance that this project will prepare the pertinent environmental studies as required in the ESMF.	UNDP CO, in their capacity as the project's IP
11	Potential negative social impacts resulting from the project, either routine or non-routine based, could lead to adverse local, regional, and/or transboundary impacts causing a delay or abandonment of the project.	Social	*Level: Moderate* L=3 I=3	During Project preparation similar Project activities have been visited and/or consulted by the team of experts to evaluate the risks. Principal social risks have been framed at this stage (Project Preparation Grant, PPG) and they will continue to be assessed along the entire project cycle for each chosen site. Based on that, a pertinent due diligence project development process, monitoring of operations, and active intervention are foreseen according to such social safeguards established in this project through the ESMF to ensure operation within the established parameters and in compliance with the applicable regulations. Therefore, this risk is assumed to be LOW under the assurance that this project will prepare the pertinent environmental studies as required in the ESMF.	UNDP CO, in their capacity as the project's IP

Annex 8: Overview of Project Staff and Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National contracting		
Project Manager (PM) *Rate: $1,740/month*	Full-time for 4 years *Total value of about $83,520*	The PM, together with the Lead Technical Advisor will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. <u>Duties and Responsibilities</u> • Manage the overall conduct of the project. • Plan the activities of the project and monitor progress against the approved work plan. • Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work. • Monitor events as determined in the project monitoring plan, and update the plan as required. • Provide support for completion of assessments required by UNDP, spot checks and audits. • Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form. • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports. • Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results. • Ensure that changes are controlled and problems addressed. • Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities. • Prepare and submit financial reports to UNDP on a quarterly basis. • Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log; • Capture lessons learned during project implementation. • Prepare revisions to the multi-year work plan, as needed, as well as annual and quarterly plans if required. • Prepare the inception report no later than one month after the inception workshop. • Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Prepare the GEF PIR; • Assess major and minor amendments to the project within the parameters set by UNDP-GEF; • Monitor implementation plans including the gender action plan, the ESMF and the SEP; • Monitor and track progress against the GEF Core indicators. • Support the Mid-term review and Terminal Evaluation process. • Liaise with the AMP Regional Project PMU Staff to request and receive operational and technical support as needed, to participate in activities led by the AMP Regional Project, and share data and information with the AMP regional Project as required. The Terms of Reference (ToR) for this position should include a clear statement indicating that a minimum of 10% of the person's time will be allocated to AMP Regional Project activities. If the PM is also delegated as the 'beneficiary(ies) representative' on the AMP Regional Project board, this should also be included in their ToR.
Project Accountant/Finance Assistant/Finance officer *Rate: $180/week*	24 weeks/year, over 4 years *Total value of about $17,280*	Duties and Responsibilities • Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager; • Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoI financial rules and procedures; • Validate and certify FACE forms before submission to UNDP; • Provide necessary financial information as and when required for project management decisions; • Provide necessary financial information during project audit(s); • Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues; • Consolidate financial progress reports submitted by the responsible parties for implementation of project activities; • Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.
Project Monitoring & Evaluation Officer *Rate: $180/week*	24 weeks/year, over 4 years *Total value of about $17,280*	Duties and Responsibilities • Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards; • Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary; • Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results; • Oversee/develop/coordinate the implementation of the stakeholder engagement plan;

Consultant	Time Input	Tasks, Inputs and Outputs
		• Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results; • Facilitate mid-term and terminal evaluations of the project; including management responses; • Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products; • Support project site M&E and learning missions; • Visit project sites as and when required to appraise project progress on the ground and validate written progress reports. • Liaise with the AMP Regional Project PMU Staff to request and receive operational and technical support as needed, to participate in activities led by the AMP Regional Project, and share data and information with the AMP regional Project as required. The Terms of Reference (ToR) for this position should clearly indicate commitment not only to the national project but also to the Regional Project's M&E protocols as regards provision of timely reporting data to the regional project staff. The ToR should also include a clear statement indicating that a minimum of 10% of the person's time will be allocated to regional project activities.
International / Regional and global contracting		
Lead Technical Advisor *Rate: $600/week*	*10 weeks/year, over 4 years* *Total value of about $24,000*	The Lead Technical Adviser will be responsible for providing overall technical backstopping and management support to the Project. The ToR for this role shall include the following responsibilities: • Ensure all technical reports, equipment, deliverables and any other products or specific terms of references that are produced or purchased by the project are at highest appropriate quality; and • Facilitate access of UNDP technical teams as per their oversight role to any technical products and deliverables of key activities both in terms of ad hoc requests and standard procedures.
For Technical Assistance		
Component 1: Policy and regulation		
Local / National contracting		
Mini-grid Policy and Regulations Specialist *Rate: $280/week*	23 weeks/year, over 4 years *Total value of about $25,760*	The purpose of this consultancy is to support the work of the international team in relation to performing the activities under Component 1, especially those related to data collection, providing insights during the analysis, and supporting the contextualization of the proposed digital transformation measures and institutional setup development to fit with the mini-grid market in Somalia and Somaliland. The consultant(s) will also play a vital role in conducting surveys and field missions with or on behalf of the international consultants.

Consultant	Time Input	Tasks, Inputs and Outputs
Communication Specialists with experience in the Energy Sector *Rate: $230/week*	52 weeks/year, over 4 years *Total value of about $47,840*	The purpose of this consultancy is to support the project team with planning and conducting the necessary stakeholder consultation and engagement meetings and activities, as well as develop promotional and awareness raising material in relation to the implementation of the activities under Component 1 and in accordance with the overall guidance detailed in the project's Stakeholder Engagement Plan (SEP). The consultant(s) will also act as the point of contact for this component, facilitating the work between the consulting team and national stakeholders.
Training Facilitators and Capacity Building Specialists with background in Energy Policy *Rate: $225/week*	26 weeks/year, over 4 years *Total value of about $23,400*	The purpose of this consultancy is to support the project team with conducting the necessary training workshops, and other individual and institutional capacity building activities involved in the successful achievement of Component 1. In the preparation of training material and operation manuals, the consultant(s) will collaborate with the AMP Regional Project and follow the guidance issued by the Communities of Practice (CoPs) to ensure harmonization and knowledge sharing on the activities under Component 1.
International / Regional and global contracting		
Mini-grid Policy and Regulations Expert *Rate: $500/week*	26 weeks/year, over 4 years *Total value of about $52,000*	The purpose of this consultancy is to analyze existing regulations and policies of relevance to mini-grid development to propose tariff structures and develop the most suitable strategy for digital transformation, in accordance with the results of the DREI analyses and similar studies conducted by other development partners.
Organizational Development and Institutional Capacity Building Expert *Rate: $500/week*	30 weeks/year, over 4 years *Total value of about $60,000*	The purpose of this consultancy is to assess the resources and capacities available in public sector entities, and conduct a needs assessment to identify the additional skills and resources required to operationalize existing regulations and create a well-equipped unit/department to be in charge of the digital monitoring of the mini-grid sector. This includes the development of a data flow diagram to promote intra-government collaboration and facilitate the data flow in relation to mini-grid programmes and initiatives.
Technical Standards and Quality Control Expert *Rate: $500/week*	*28 weeks/year, over 2 years* *Total value of about $28,000*	The purpose of this consultancy is to study existing quality standards for mini-grid systems and system components to create a comparative analysis of their suitability for adoption in Somalia, followed by the domestication of the selected standards and the development of the relevant manuals and importation requirements.
Contractual services - Individuals	*Contract value: $50,000*	The purpose of this contracting is to hire national and international consultants to conduct the initial full quantitative national DREI analysis during Year 1 of project implementation.
Professional services	*Contract value: $200,000*	This service provider will be responsible for supporting the project team with digital transformation activities. The support team will include international digital transformation experts and as well as local software developers and frontend designers. The amount also includes the purchase of licenses for tracking systems and online platforms, as appropriate. It is recommended that the contracts for these services are awarded to consortiums involving national and international companies and individuals, to ensure quality, contextualization, and knowledge production and transfer.
Component 2: Business Model innovation with private sector engagement		

Consultant	Time Input	Tasks, Inputs and Outputs
Local / National contracting		
Mini-grids Local Engineers *Rate: $300/week*	35 weeks/year, over 4 years *Total value of about $42,000*	The purpose of this consultancy is to support the design and implementation of the pilot project(s) by carrying the work on the ground at the project sites, whether related to data collection, surveys, or overseeing the installation, commissioning and operation of the installed systems. The tasks also include regular reporting on the technical performance of the systems to the project team.
Procurement and Logistics Specialist *Rate: $200/week*	32 weeks/year, over 2 years *Total value of about $12,800*	The purpose of this consultancy is to support the project team with the development and implementation of all procurement activities under the project. The work constitutes developing a procurement plan for the pilot project(s), including system components and measurement sensors, as well as managing the tendering processes and supporting the UNDP CO with managing the shipping, customs clearance and other logistics. The procurement plan will be reviewed and approved by the international consultant(s) contracted as Hybrid Mini-Grid Design Experts prior to the actual purchase of goods.
Training Facilitators and Capacity Building Specialists with Engineering background *Rate: $225/week*	28 weeks/year, over 4 years *Total value of about $25,200*	The purpose of this consultancy is to support the project team with conducting the necessary training workshops, and other individual and institutional capacity building activities involved in the successful achievement of Component 2. In the preparation of training material and operation manuals, the consultant(s) will collaborate with the AMP Regional Project and follow the guidance issued by the Communities of Practice (CoPs) to ensure harmonization and knowledge sharing on the activities under Component 2.
Professional services	*Contract value: $105,000*	This service provider will be responsible for supporting the project team with conducting market research and associating studies. The studies include conducting needs assessment and community surveys at the selected sites for the pilot project(s), as well as private sector mapping on the national level and needs assessment for ESPs to define the technical gaps which the academic certification programme should address, and the commercial gaps with the mini-grid industry associations should focus on. It is recommended that the contracts for these services are awarded to consortiums involving national and international companies and individuals, to ensure quality, contextualization, and knowledge production and transfer.
International / Regional and global contracting		
Hybrid Mini-grid Design Experts *Rate: $600/week*	30 weeks, over 4 years *Total value of about $72,000*	The purpose of this consultancy is to design suitable pilot project(s), including the identification of all technical specifications and confirmation on the suitability of the proposed sizing for the selected site. The design will also take into consideration the digital transformation effort undertaken under Component 1 to ensure the design contains the sensors and measurement equipment necessary for model operationalization.
Mini-grid Education and Vocational Training Expert *Rate: $500/week*	24 weeks/year, over 4 years *Total value of about $48,000*	The purpose of this consultancy is to work with educational institutions and vocational training centers on the development of the one-year certification programme. This includes performing baseline assessment for existing training programmes, researching relevant programmes worldwide and establishing contacts with reputable institutions for potential partnership with national parties, as well as working with both teams on the formulation of curricula, preparing course material and organizing/conducting ToT for local staff at national institutions.

Consultant	Time Input	Tasks, Inputs and Outputs
Component 3: Scaled-up financing		
Local / National contracting		
Energy Finance Specialist *Rate: $320/week*	34 weeks/year, over 4 years *Total value of about $43,520*	The purpose of this consultancy is to support the work of the international team in relation to performing the activities under Component 3, especially those related to data collection, providing insights during the analysis, and supporting the contextualization of the proposed financing mechanisms and incentive schemes to fit with the mini-grid market in Somalia. The consultant(s) will also play a vital role in conducting surveys and field missions with or on behalf of the international consultants.
Communication Specialists with experience in the Finance Sector *Rate: $230/week*	32 weeks/year, over 3 years *Total value of about $22,080*	The purpose of this consultancy is to support the project team with planning and conducting the necessary stakeholder consultation and engagement meetings and activities, as well as develop promotional and awareness raising material in relation to the implementation of the activities under Component 3 and in accordance with the overall guidance detailed in the project's Stakeholder Engagement Plan (SEP). The consultant(s) will also act as the point of contact for this component, facilitating the work between the consulting team and national stakeholders.
Training Facilitators and Capacity Building Specialists with background in Finance *Rate: $225/week*	32 weeks/year, over 2 years *Total value of about $14,400*	The purpose of this consultancy is to support the project team with conducting the necessary training workshops, and other individual and institutional capacity building activities involved in the successful achievement of Component 3. In the preparation of training material and operation manuals, the consultant(s) will collaborate with the AMP Regional Project and follow the guidance issued by the Communities of Practice (CoPs) to ensure harmonization and knowledge sharing on the activities under Component 3.
International / Regional and global contracting		
Financial Market Analysis and Financing Mechanisms Development Experts *Rate: $500/week*	38 weeks/year, over 4 years *Total value of about $76,000*	The purpose of this consultancy is to undertake a mapping exercise for previous and ongoing financing schemes within the mini-grid sector in Somalia and perform a holistic analysis of investment opportunities and cost-reduction levers. This includes developing a survey to study how the sector operates, identify the stakeholders involved, and study present and expected challenges potentially affecting the scaling up of investment in hybridization or fully renewable mini-grid systems. The result of the study should include a recommendation for suitable financing mechanisms and incentive schemes for mini-grid development.
Investor Relations and Capacity Building Expert *Rate: $500/week*	34 weeks/year, over 2 years *Total value of about $34,000*	The purpose of this consultancy is to build a network of previous and potential investors in the mini-grid sector in Somalia, developing the necessary manuals and guidance notes with a summary of applicable regulations and de-risking measures, in accordance with the results of the DREI analysis and similar studies conducted by other development partners. The tasks also include preparing material for capacity building activities dedicated to the domestic financial sector and conducting ToT sessions to ensure the longevity of the knowledge production and sharing efforts.
Component 4: Knowledge Management (KM) and Monitoring and Evaluation (M&E)		
Local / National contracting		

Consultant	Time Input	Tasks, Inputs and Outputs
SES and Gender Officer(s) *Rate: $250/week*	10 weeks/year, over 4 years *Total value of about $10,000*	The expert will be nationally recruited by the UNDP and she/he will be responsible for undertaking social and environmental studies related to the activities of the project. <u>Duties and Responsibilities for the Safeguards role:</u> • Monitor progress in development/implementation of the project ESMF ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all safeguard related plans; • Ensure social and environmental grievances are managed effectively and transparently; • Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary; • Ensure full disclosure with concerned stakeholders; • Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation; • Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project; • Assist the finance and administration staff by providing technical inputs during the preparation and revision of the Management Plan, Annual Work Plans, periodic reports such as the Combined Project Implementation Review/Annual Project Report (PIR/APR), inception report, technical reports, quarterly reports for submission to UNDP, the GEF, other donors and Government Departments, as required; • Ensure quality control of interventions/outcomes/deliverables; • Document lessons learned from project implementation and make recommendations to the Steering Committee for more effective implementation and coordination of project activities. <u>Duties and Responsibilities for the Gender role:</u> • Monitor progress in the implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled; • Oversee/develop/coordinate the implementation of all gender-related work; • Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary; • Work with the M&E officer and Safeguards Officer to ensure reporting, monitoring and evaluation fully address the gender issues of the project.
Local M&E Consultant to support the Mid-term Review (MTR)	Year 2 (Q4) *Total value of about $20,000*	Contracted to support the international M&E Consultant in performing the MTR for the project.

Consultant	Time Input	Tasks, Inputs and Outputs
Local M&E Consultant to support the Terminal Evaluation (TE)	Year 4 (Q3) *Total value of about $20,000*	Contracted to support the international M&E Consultant in performing the TE for the project.
Contractual services - Companies	*Contract value: $5,000*	This local contractor will be responsible for data collection and development of communications content (including photos and/or video footage) for the preparation of an 'insight brief' capturing (in an accessible format) selected key highlights from successful national project activities. This insight brief will be developed in a standard format provided by the AMP Regional Project. The AMP Regional Project will also support the dissemination of the Insight Briefs developed by the national AMP projects.
International / Regional and global contracting		
International M&E Consultant	Year 2 (Q4) *Total value of about $50,000*	Contracted to conduct the MTR for the project, including review of the available document, field mission, interviews with stakeholders, providing recommendations, and issuance of the MTR report.
International M&E Consultant	Year 4 (Q3) *Total value of about $50,000*	Contracted to conduct the TE for the project, including review of the available document, field mission, interviews with stakeholders, assessment of lessons learned, and issuance of the TE report.
Professional services	*Contract value: $50,000*	This service provider will be responsible for supporting the project team with the design and implementation of effective KM, M&E and QA systems and procedures. This includes the development of templates for the team to use in reporting, as well as the design of suitable surveys in English and other local languages, as appropriate.

Annex 14: GEF Core indicators

Core Indicator 6	**Greenhouse gas emission mitigated**					***(Metric tons of CO_2e)***
			Expected metric tons of CO_2e (6.1+6.2)			
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	*45,400*	*29,577*		
		Expected CO2e (indirect)	*967,392*	*594,000*		
Indicator 6.4	Increase in installed renewable energy capacity per technology					
		Technology	Capacity (MW)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Solar Photovoltaic	*0.9*	*2.116 MW*		
		Energy Storage		*3.300 MWh*		
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**					***(Number)***
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female	*91,584*	*33,335*		
		Male	*91,584*	*33,335*		
		Total	*183,168*	*66,670*		

Annex 15: GEF 7 Taxonomy

Level 1	Level 2	Level 3	Level 4
☒**Influencing models**			
	☒ **Transform policy and regulatory environments**		
	☒ **Strengthen institutional capacity and decision-making**		
	☒ **Convene multi-stakeholder alliances**		
	☒ **Demonstrate innovative approaches**		
	☒ **Deploy innovative financial instruments**		
☒**Stakeholders**			
	☐**Indigenous Peoples**		
	☒**Private Sector**		
		☒Capital providers	
		☒ Financial intermediaries and market facilitators	
		☒Large corporations	
		☒SMEs	
		☒Individuals/Entrepreneurs	
		☐Non-Grant Pilot	
		☐Project Reflow	
	☒**Beneficiaries**		
	☒**Local Communities**		
	☒**Civil Society**		
		☒Community Based Organization	
		☐ Non-Governmental Organization	
		☐Academia	
		☐ Trade Unions and Workers Unions	
	☒**Type of Engagement**		
		☒Information Dissemination	
		☒Partnership	
		☒Consultation	
		☒Participation	
	☒**Communications**		
		☒Awareness Raising	
		☒Education	
		☒Public Campaigns	
		☒Behavior Change	
☒ **Capacity, Knowledge and Research**			
	☒**Enabling Activities**		
	☒**Capacity Development**		
	☒ **Knowledge Generation and Exchange**		
	☐**Targeted Research**		
	☒**Learning**		
		☒Theory of Change	
		☒Adaptive Management	
		☒Indicators to Measure Change	
	☒**Innovation**		
	☒**Knowledge and Learning**		
		☒Knowledge Management	
		☒Innovation	
		☒Capacity Development	
		☒Learning	
	☒ **Stakeholder Engagement Plan**		

☒**Gender Equality**			
	☒**Gender Mainstreaming**		
		☒Beneficiaries	
		☒Women groups	
		☒Sex-disaggregated indicators	
		☒Gender-sensitive indicators	
	☒**Gender results areas**		
		☐Access and control over natural resources	
		☒Participation and leadership	
		☒Access to benefits and services	
		☒Capacity development	
		☒Awareness raising	
		☒Knowledge generation	
☒**Focal Areas/Theme**			
	☒**Climate Change**		
		☒**Climate Change Mitigation**	
			☐Agriculture, Forestry, and other Land Use
			☒Energy Efficiency
			☐ Sustainable Urban Systems and Transport
			☒Technology Transfer
			☒Renewable Energy
			☒Financing
			☒Enabling Activities
		☒ **United Nations Framework on Climate Change**	☒Nationally Determined Contribution
	☒ **Rio Markers**		
		☒Paris Agreement	
		☒Sustainable Development Goals	
		☐Climate Change Mitigation 0	
		☐Climate Change Mitigation 1	
		☒Climate Change Mitigation 2	
		☐Climate Change Adaptation 0	
		☐Climate Change Adaptation 1	
		☐Climate Change Adaptation 2	