National child project under the GEF Africa Mini-grids Program Djibouti

Part I: Project Information

Name of Parent Program
GEF-7 Africa Minigrids Program

GEF ID
10471

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
National child project under the GEF Africa Mini-grids Program Djibouti

Countries
Djibouti

Agency(ies)
UNDP

Other Executing Partner(s)
Ministry of Urban Planning, Environment and Tourism

Executing Partner Type
Government

GEF Focal Area
Climate Change

Taxonomy

Focal Areas, Climate Change, United Nations Framework Convention on Climate Change, Nationally Determined Contribution, Climate Change Mitigation, Technology Transfer, Financing, Renewable Energy, Energy Efficiency, Sustainable Development Goals, Influencing models, Demonstrate innovative approache, Deploy innovative financial instruments, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Stakeholders, Type of Engagement, Communications, Local Communities, Beneficiaries, Civil Society, Private Sector, Gender Equality, Gender results areas, Gender Mainstreaming, Capacity, Knowledge and Research, Capacity Development, Enabling Activities, Knowledge Exchange, Innovation, Knowledge Generation, Learning

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 2

Climate Change Adaptation

Climate Change Adaptation 0

Submission Date

6/19/2021

Expected Implementation Start

4/1/2022

Expected Completion Date

3/31/2026

Duration

48In Months

Agency Fee($)

276,421.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-1-1	Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technology and electric mobility	GET	3,071,347.00	15,840,000.00
		Total Project Cost($)	**3,071,347.00**	**15,840,000.00**

B. Project description summary

Project Objective

Supporting access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low carbon mini grids in Djibouti, with a focus on cost reduction levers and innovative business models

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1: Policy and regulation	Technical Assistance	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. Institutional set-up for rural electrification assessed to support the establishment of a focal point for mini-grid development, and institutional capacity building provided on technical, managerial, and regulatory issues. 1.4. Public programmes (apprenticeships, certificates, university programs) to develop competitive, skilled labor	GET	664,736.00	860,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2: Business Model innovation with private sector	Investment	Outcome 2: Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini-grid development	2.1. Pilots for low-carbon mini-grids are developed, to demonstrate business models for off-grid electricity including productive use/innovative appliances, leading to cost-reduction in mini-grids.	GET	1,265,321.00	11,640,000.00
Component 2: Business Model innovation with private sector	Technical Assistance	Outcome 2: Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini-grid development	2.2. Capacity of potential tender bidders (private sector developers) strengthened to consider innovative business models and cost-reduction levers. 2.3. Support provided to establish and grow a national industry association of private sector mini-grid developers.	GET	416,893.00	880,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 3: Scaled-up financing	Technical Assistance	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, provided for Mini-grid Funding Facility (MFF) or equivalent financial mechanism, under rural electrification agencies/funds, such as the National Development Fund (NDF) or the Guarantee Fund (GF).	GET	345,899.00	850,000.00
			3.2. Domestic financial sector capacity building on business and financing models for mini-grids.			
			3.3. Capacity building provided to local mini grid developers and investors on measuring and reporting on impact indicators, building credibility in impact investment as an asset class.			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 4: Digital, Knowledge Management (KM) and Monitoring and Evaluation (M&E)	Technical Assistance	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 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 pilots, 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 pilots 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	GET	232,243.00	850,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
				Sub Total ($)	**2,925,092.00**	**15,080,000.00**
Project Management Cost (PMC)						
				GET	146,255.00	760,000.00
				Sub Total($)	**146,255.00**	**760,000.00**
				Total Project Cost($)	**3,071,347.00**	**15,840,000.00**

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
GEF Agency	UNDP	Grant	Investment mobilized	50,000.00
Donor Agency	World Bank (IDA Credit)	Loans	Investment mobilized	15,790,000.00
			Total Co-Financing($)	**15,840,000.00**

Describe how any "Investment Mobilized" was identified

UNDP CO in Djibouti will support the project with USD 50,000 from its annual core resources. The WB is financing the Djibouti Sustainable Electrification Project (SEP) between 2017 to 2023. The amount yet to be disbursed is 15.79 million USD in the form of a loan to the Government of Djibouti.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNDP	GET	Djibouti	Climate Change	CC STAR Allocation	3,071,347	276,421
				Total Grant Resources($)	**3,071,347.00**	**276,421.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

125,000

PPG Agency Fee ($)

11,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNDP	GET	Djibouti	Climate Change	CC STAR Allocation	125,000	11,250
				Total Project Costs($)	**125,000.00**	**11,250.00**

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	0	36717	0	0
Expected metric tons of CO?e (indirect)	0	36000	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)		36,717		
Expected metric tons of CO?e (indirect)		36,000		
Anticipated start year of accounting		2024		
Duration of accounting		20		

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
Solar Photovoltaic select		0.84		
Energy Storage select		2.04		

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		8,999		
Male		10,147		
Total	0	19146	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Part II. Project Justification

1a. Project Description

The proposed strategy in this Project Document builds upon the strategy presented in the Concept Note for this project. It continues to be aligned with GEF focal area on Climate Change Mitigation (CCM-1-1) targeting the promotion of innovation and technology transfer for sustainable energy breakthroughs for de-centralized renewable power with energy usage. The project is also aligned with the UN?s Sustainable Development Goals (SDGs) and contributes to achieving SDG-7 which identifies electricity is an essential ingredient for lifting people out of poverty, improving health, boosting educational levels, reducing gender inequities, and enabling sustainable economic development. The project also contributes to achieving SDG-13 by contributing to integrating climate change measures into national policies, strategies and planning, and SDG-5 by utilizing all project activities as opportunities to promote diversity and gender-balance to help achieve gender equality and empower women and girls.

The project?s title has not been changed during PPG development. The objective, components and outcomes have been updated by the AMP Regional Project team for all countries participating in the AMP. Furthermore, some of the proposed outputs have been rephrased to enhance their clarity and specificity, while new outputs have been introduced to address specific challenges identified during PPG development. The following table presents a summary of the changes proposed to the project outputs from the Concept Note to the CEO ER.

Table 1: Summary of changes between Concept Note and CEO ER

Changes to project design during PPG development	Justification for change

Changes to project design during PPG development	**Justification for change**
The objective statement and the wording of components, outcomes and indicators have been updated by the AMP Regional Project for all countries participating in the programme: Objective in Concept Note: Supporting access to clean energy by increasing the financial viability and promoting scaled-up commercial investment in mini-grids in Djibouti. The new objective: *Supporting access to clean energy by increasing the financial viability, and promoting scaled?up commercial investment, in low-carbon mini-grids in Djibouti, with a focus on cost-reduction levers and innovative business models.* Component 1: Policy and Regulation The new 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.* Component 2: ~~Mini?grid Project and~~ Business Model Innovation with Private Sector ~~Engagement~~ The new outcome: *2. Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini-grid development mini-grids.* Component 3: ~~Innovative~~ *Scaled-up* Financing ~~for Mini-grids~~ The new 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.* Component 4: ~~Convening, dissemination, tracking (~~*Digital,* Knowledge Management (KM) *and Monitoring and Evaluation (M&E)*	UNDP has developed a revised Harmonized Results Framework for AMP National Child Projects based on the set of components, outcomes and outputs included in the Program Framework Document (PFD) and national child project Concepts approved by the GEF Council in December 2019. The AMP Harmonized Results Framework (AMP) is an evolution from the PFD/Concept phase results framework and reflects the most updated thinking and guidance provided to national project design teams during the Project Preparation Grant (PPG) Phase for 1st round national child projects (Jan 2020 ? Jun 2021). All changes are explained in further below. However, the basic thinking around these changes is explained as follows: ? Objective: the objective has been adjusted to better reflect the program?s focus on cost-reduction. ? Component/Outcome 1. Changes made to emphasize on the importance of having governments make an informed (and sufficiently socialized) decision as to the Delivery Model they will pursue for the development of their local mini?grid market, as well as the need for developing a certain set of regulations in accordance with a given delivery model. ? Component/Outcome 2. Changes made to emphasize opportunity, in working with MG developers, for AMP to in particular include a focus on supporting inclusivity, i.e. working with domestic or under-represented MG developers (i.e., not just the large international actors). ? Component/Outcome 3. Given the prevalence of early markets in both 1st and 2nd round countries, changes were made to emphasize opportunity for AMP to in particular work on capacity building for (i) the domestic financial sector in assessing MG investment opportunities, and (ii) MG developers to create a pipeline of accessible investment opportunities. Both these areas can provide significant value in preparing the market for scale-up. ? Component/Outcome 4: Changes made to reflect UNDP?s views of digitalization and data as increasingly important and key to AMP. All national child projects will include a digital strategy in component 4; this strategy will then guide various other outputs on data which can be spread across the other components. Considerable support and linkages on data from the regional project to each national child project are included in the program?s design.

Changes to project design during PPG development	Justification for change
A new output is added: *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.*	This additional output take the long-term sustainability of the mini-grid sector into focus by initiating a national dialogue to assess and reach consensus on the selected model(s).
Linkage to AMP Regional Project is added to the output on conducting DREI techno-economic analyses. The new 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.*	This output has been adjusted to better reflect the linkages between this output and activities for a proposed flagship AMP report under Component 1 (Knowledge Tools) of the AMP Regional Child Project. These activities have been identified in the PPG Phase of the Regional Child Project. The change aims to strengthen and emphasize the role of DREI in AMP, where the Regional Project will now produce a key flagship report on cost-reduction using the DREI methodology drawing from DREI analyses and content generated across all AMP national Child Projects.
Capacity building for public officials is included in a new output tackling institutional capacity building and the establishment of a national focal point for mini-grid development: Output in Concept Note: 1.3. Capacity building provided to public officials (regulator, ministries) specifically to design procurement/tender processes that incorporate cost-reduction levers and innovative business models. The new output: *1.3. Institutional set-up for rural electrification assessed to support the establishment of a focal point for mini-grid development, and institutional capacity building provided on technical, managerial, and regulatory issues.* **The change is accompanied by an increase of $108,525 of the allocated TA budget for Component 1.**	The institutional capacity has been identified as one of the bottlenecks for achieving rapid progress on donor-funded mini-grid projects and engaging private EPC and ESCOs in the mini?grid sector. During PPG development, several bodies were identified as involved in mini-grid development, but there was no clear arrangement for consolidating the effort of the different partners involved in renewable energy and/or mini?grid development and no focal point with the specific mandate of ensuring intra-government coordination and promoting private sector participation in the solar and hybrid mini-grid sector. Therefore, developing an institutional setup is proposed to support the Government to manage and promote mini-grid development efforts during the project?s lifetime and afterward. The proposed output also includes capacity building activities for public officials as part of the institutional capacity building effort.
Reference to ?the design, operation and maintenance of solar and hybrid? is added to the output on technical capacity building on mini-grids: Output 1.4. Public programmes (apprenticeships, certificates, university programs) to develop competitive, skilled labor market in *the design, operation and maintenance of solar and hybrid* mini-grids.	The technical capacity of operators and lack of experience with solar PV systems were identified by stakeholders as one of the obstacles facing private sector engagement in mini-grid projects involving renewable energy components. The additional text aims to ensure that the capacity building activities focus primarily on solar and hybrid mini-grid systems.

Changes to project design during PPG development	Justification for change
In addition to removing the reference to EE standards, the output on quality standards has been expanded to refer more broadly to in-charge authorities: Output in Concept Note: 1.2. Domestication of quality standards for: (1) solar minigrid components; (2) electrical appliances (air conditioners, refrigerators and lighting); (3) thermal insulation, and institutional capacity of ADME and l?Agence Djiboutienne de Normalisation strengthened. The new output: *1.5. Domestication of quality standards for solar mini-grid components, and institutional capacity of national authorities in-charge, i.e. standards organizations/bureau, strengthened.*	This output builds upon Output 1.2 under the ongoing GEF6 mini-grid project, which covers the adoption of norms, standards and labels. Therefore, the scope of this output has been expanded to include all relevant authorities as target groups for institutional capacity building on quality control and assurance.
The proposed location for the pilots is changed from ?Balbala? to ?Yoboki and Khor-Angar?. Also reference to ?e.g. milk and fish processing? is replaced with ?ice production?, and reference to ?solar street lighting? is added to the output on pilot projects: Output 2.1. Pilots *for low-carbon mini-grids are developed, to demonstrate business models for off-grid electricity* including productive use/innovative appliances, leading to cost-reduction in mini-grids. **The change is accompanied by an increase of $627,665 of the allocated INV budget for Component 2.**	During PPG consultations, MUET and MERN explained that there are no milk and fish processing activities in off-grid locations. They indicated that the establishment of an ice production facility could support the growth of commercial businesses. Hence, they requested to increase the investment funds for the mini-grid pilots to enable the installation of larger capacities to supply residential users and productive use. In addition, MUET and MERN emphasized that street lighting is a critical need for public safety. Therefore, the GEF investment fund has been tentatively redistributed such that USD 825,656 (65%) is used for developing two mini-grid pilot systems, USD 314,000 (25%) for establishing one ice production facility to promote and demonstrate productive use, and USD 125,656 (10%) for purchasing standalone solar street lighting units. The exact pilots and fund split will be validated using the findings of additional assessments during implementation.
Reference to ?public officials in MERN and EDD? is removed from the output on capacity building for private sector developers: Output 2.2. Capacity of potential tender bidders (private sector developers) strengthened to consider innovative business models and cost-reduction levers.	There seems to be a typo in the wording of this output in the concept note. The wording is obtained from the suggested outputs for national projects in the AMP PFD, where it refers to potential bidders (private sector developers), but then adds reference to public officials. The inclusion of business model capacity building for public officials constitutes redundancy, since this will be covered under institutional capacity building (Output 1.3 above).

Changes to project design during PPG development	Justification for change
Institutional capacity building for private sector companies is included under a new output replacing capacity building of winning bidders: Output in Concept Note: 2.3. Capacity of winning tender bidders (private sector developers) strengthened to develop and implement innovative business models and cost-reduction levers. The new output: *2.3. Support provided to establish and grow a national industry association of private sector mini-grid developers.* **The change is accompanied by an increase of $100,000 of the allocated TA budget for Component 2.**	At the time of PPG development, all mini-grid systems are owned and operated by the Government. Therefore, dedicating resources for ?winning bidders? is not applicable. In addition, during PPG development, the Chamber of Commerce in Djibouti was identified as one of the stakeholders in the energy sector. However, there were no special committees within the chamber or other energy-related associations to represent the collective views of national operators during the consultation process. The presence of such an association aims to facilitate the interaction between the public and private actors in relation to mini-grid development. The association could also serve as a proper entry point for pipeline development for foreign developers interested in exploring suitable opportunities and participating in new tenders.
The following output has been merged to avoid redundancy: Outputs in Concept Note: Output 3.3. Capacity building (e.g. trainings) provided to local mini?grid investors Output 3.4. Training provided to local developers The new output: 3.3. Capacity building provided to local mini?grid developers and investors *on measuring and reporting on impact indicators, building credibility in impact investment as an asset class.*	The wording of output 3.3 is expanded to elaborate on the scope of capacity building and emphasize the focus on financial planning and investment. It is not clear what this output 3.4 can add beyond Outputs 1.3, 2.2 and 3.3, which dedicate resources for private sector capacity building on the level of technical knowledge, business model and cost-reduction levers, and financing models, respectively.

Changes to project design during PPG development	Justification for change
The following component and outcome and all reference to Energy Efficiency (EE) in the different components, outcomes and outputs have been removed: Component 4: Energy efficiency in buildings (thermal insulation and electrical appliances) as an additional cost reduction lever for solar PV-battery mini-grids Outcome 4: Technical and financial support provided to reduce demand load, mainly cooling, in social housing making provisioning of electricity from solar PV-battery mini-grids more efficient and cost-effective. **The change is accompanied by re-allocation of $627,665 of INV funds to Component 2 (i.e. towards increasing the capacity of the solar PV-batteries mini-grid pilots, the establishment of an ice production facility to promote productive use of mini?grid generated power, and the purchase of stand-alone solar street lighting units at the pilots? locations). The $208,525 of TA funds will be re?allocated to new outputs proposed under Components 1 and 2.**	The scope of the project in the concept note had a component targeting the promotion of Energy Efficiency (EE). The AMP in Djibouti was the only national project to propose the integration of EE outputs in the project strategy and assign budget for activities not directly related to mini-grid development. Outputs under the proposed EE component involved aspects of EE in appliances, EE in buildings and encouraging the fabrication of eco-friendly building material. At the time of developing the PPG for the AMP in Djibouti, the GEF6 mini-grid project was not advancing according to its planned schedule. The delay is partially due to COVID-19, but also because the off-gird energy market in Djibouti is in the early stages of development and requires dedicated effort and time to make the desired progress and achieve the aspired outcomes, especially with regards to enhancing mini-grid policies and creating an enabling environment for private sector participation. Hence, the Implementing Partner (MUET) decided to remove all reference to EE activities in the results framework and project documents. This change aims to align the national project with the AMP regional chapeau and support the implementation team with achieving tangible results during the project?s lifetime by focusing on one developmental area, i.e. mini-grid development. This change has no effect on the project?s title, however, the objective, components and outputs have been revisited to reflect the refined scope.
Outcome in Concept Note: 5. Convening, dissemination, tracking (knowledge management). The new outcome: *4. Digital and data 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.* The following are the new outputs:	The Outcome and Outputs on Knowledge Management and Monitoring and Evaluation (M&E) have been revisited to reflect the updated objectives and components as presented in the AMP Harmonized Framework.
4.1. A Project Digital Strategy is developed and implemented, including linkages to and following guidance from, the AMP Regional Project.	The change was made to establish a clear link via an output between the national child projects and the regional child project. At the same time, this output was created to reflect the importance of each national child project developing, with support from the regional project, a strategy to harness the opportunities around digitalization in the mini?grids sector.

Changes to project design during PPG development	Justification for change
4.2. Mini-grids digital platform implemented to run tenders and manage data from pilots, and to support mini?grids scale-up and cost-reduction.	Change made to include a digital platform which will provide key functionality for the projects 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 mini?grids, including linking to the AMP regional project and (iii) acting as the mechanism for tenders for mini?grid developers/sites.
4.3. A Quality Assurance and Monitoring Framework (QAMF) for measuring, reporting and verification of the sustainable development impacts of all mini?grid pilots supported, including GHG emission reductions, is *adopted* and operationalized *based on standardized guidance from the AMP Regional Project.*	The change was made to establish a clear link via an output between the national child projects and the regional child project. The latter will provide support for standardizing the Quality Assurance and Monitoring Framework (QAMF) that national ?child? project pilots will use to report back on relevant performance indicators ? providing visibility for program-wide AMP results and case studies and contributing to close knowledge gaps in the sector.
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).	The change was made to establish a clear link via an output between the national child projects and the regional child project.
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.	This change was made following UNDP guidance to reflect M&E activities in the Results Framework.
The indicator targets are slightly above than as expected at the PFD, but indicator 11 has decreased.	**Decrease in Indicator 11.** The reason for the decrease in indicator 11 (number of direct beneficiaries) is that at CEO ER stage, the number of connections per kW of installed Solar PV capacity has been revised downwards. At PIF stage, it was assumed that a 30 kWp Solar PV minigrid could serve 6,000 people (1,200 household connections); that is, an average of 40 residential connections per kW of installed Solar PV capacity. At CEO ER stage, a system configuration has been estimated to serve an indicative market that includes residential, social, and commercial/PUE users. Based on the system sizing formulas used, instead of 40 connections, 4.6 connections can be served per kW of installed Solar PV capacity. An explanation of the system sizing formulas used has been added to Annex 13 and the excel spreadsheet with the calculations has been uploaded to the portal.

1a. *Project Description*. Elaborate on:

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

It is the ultimate goal of all governments to provide universal access to modern energy services as a basis for development. The most recent document available on GHG emissions in Djibouti is the ?3rd National Communication on Climate Change?. For the electricity sector, the report assesses the emissions of three scenarios from 2010 as the base year until 2030. In the first scenario, which is the status quo scenario, the report indicates that by 2030 the electric mix will be made up of thermal turbines, combining the existing HFO and diesel turbines with new capacities of 170 MW Natural Gas / HFO upgraded turbines installed in stages over the next decade. In this scenario, the unmet demand for electricity is estimated at 245 GWh and the combined GHG emissions over the period are estimated at 11,848 Million Mt. Two other scenarios were also developed in the document. A ?transition? scenario in which the mix of electricity production infrastructure incorporates a fraction of renewable capacities and a ?mitigation? scenario in which renewable resources are fully exploited and constitute the only source of electricity supply to meet the country's electricity needs. The ?Mitigation? scenario is drawn up on the basis of the latest electricity sector deployment plan and published by the government in late 2019. The total installed capacity in this scenario exceeds 600 MW with additional capacities coming from tidal energy, biomass, geothermal energy, solar, wind, hydro-interconnection as well as existing thermal power plants. The electricity distributed under the mitigation scenario comes exclusively from renewable resources and it is planned to keep existing thermal power plants as backup power sources to fill the intermittent nature of renewable electricity. The GHG emissions of the ?Mitigation? scenario is estimated at 1,849 Million Mt for the entire reporting period (zero from 2022 to 2030, due to the commissioning of renewable plants that will meet the country's electricity needs). Compared to the baseline scenario in which the trend is business as usual, the mitigation scenario will reduce the country's GHG emissions by 84%.

The mini-grid sector in Djibouti is characterized by a low penetration rate of energy services with coverage of less than 10% of the total rural population that has access to electricity services. Access to energy services covers two types of areas for the country according to the understanding of the government. The ?domestic fuel? sector from the resource (in particular wood, which leads us to fight against wild deforestation) to end use (improvement of the yields of cooking stoves); and electricity access projects, both on-grid and off-grid. The electrification of rural populations by modern energies offers many advantages, in particular an improvement in economic productivity, literacy and a multifaceted contribution to the development of the most disadvantaged sections of rural populations; but also in terms of lives saved thanks to the electrification of dispensaries and health centers (improvement of patient care thanks in particular to the availability of drugs and vaccines in these centers, but also an improvement in the conditions of childbirth and care for mothers). The AMP project contributes to achieve the country's objectives of producing 100% of its electricity needs with renewable energies and improving the condition of the rural population.

Previous and ongoing interventions by the authorities and development partners encountered common barriers which ought to be taken in consideration during the design of new interventions. The following are some of the obstacles identified during PPG development as limiting the government?s ability to utilize solar and hybrid mini-grid development as an approach towards achieving universal electricity access:

- Limited data on potential opportunities for mini-grid development and a model for tariff calculations that is commercially viable for private sector companies,
- Lack of a clear institutional setup and a national focal point for mini-grid development,
- Lack of quality standards for system components and technical education on low-carbon mini-grids,

- Limited capacity of local EPCs and ESCOs to undertake tender preparation and O&M services,
- Limited representation of private sector in rural electrification planning,
- Limited access of ESPs to financial schemes & incentives, and
- Lack of platforms dedicated to knowledge sharing and dissemination.

In conclusion, there are many challenges facing private sector engagement in the development of the mini-grid sector in Djibouti, and consequently limiting the government capacity to undertake rural electrification plans and achieve universal energy access. By participating in the Africa Mini-grid Programme (AMP), the Government aims to overcome these challenges and introduce the EPC+ESCO model for mini-grid delivery. Thus, the AMP in Djibouti 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. EPCs, ESCOs, as well as local investors, to enhance their capacities and processes to become more efficient in preparing winning tenders and managing O&M processes that generate profit, yet achieve the highest possible social returns for the electricity users in off-grid areas.

2) the baseline scenario and any associated baseline projects,

In Djibouti, the baseline in the energy sector is that the Government owns and operates all power plants, including the only four solar PV mini-grid systems in the country. Those are:

- CERD 300 kWp solar power plant
- As Eyla 150 kWp solar power plant
- Adaylou 100 kWp solar power plant
- Ali Adde 62 kWp solar power plant (in extension)
- Moumina 1 solar power plant (tender in progress under GEF6 project)

Electricity tariffs in Djibouti range from a social price of US$0.153/kWh (life-line tariff) to US$0.426/kWh and are considered to be among the highest in the world. The installation and commissioning of generation plants and mini-grid systems follow an Engineering, Procurement and Construction (EPC) model. In an attempt to delegate the responsibilities of operation to private sector companies, the Government of Djibouti recently published a tender seeking to hire local operators for the Operation and Maintenance (O&M) of existing mini-grids. However, no tenders were received from bidders. The lack of interest is linked to the low capacity of the mini-grid systems, their remote locations, scattered users, and the lack of experience on operating solar mini-grid systems. There were also concerns over the commercial viability since the Government has been putting effort to maintain universal tariffs for grid-connected and off-grid users.

Key aspects of the mini-grid delivery models are still undefined and assumptions need to be validated. The following table provides a summary of the current status of key aspects of mini grid delivery models in Djibouti:

Aspect	Current Status
Ownership and Operation	The Government of Djibouti presently owns and operates all power plants in Djibouti. They indicated interest in adopting a mini-grid delivery model where they continue to build the system through EPC contracts, then award O&M contracts to private operators under ESCO tenders. An ESCO tender for national companies was published to this effect for an existing mini-grid systems, but no proposals were received. Lack of interest was linked to the system?s low capacity, its remote location and scattered users, and the lack of experience on operating solar mini-grid systems among national companies.
Tariff mechanisms	Tariffs are presently set for mini-grid electricity in a range equivalent to social users of grid electricity. The previous tender for O&M services left the tariff open for competition, i.e. followed a cost of service model. However, additional consultations are required to gain insight on what operators would consider to be a suitable tariff level since there is no records of bids received on baseline tenders. The ongoing GEF6 project for mini-grid development has a component for developing tariff structure for mini-grids, i.e. a study to establish a clear price for rural electricity. During PPG development for the AMP, the consultant to conduct this study was yet to be hired.
Subsidy mechanisms	Per PPG consultations, the Government of Djibouti intends to finance the CAPEX for mini?grid projects and would like to delegate the OPEX to private operators. It was noted that the present model of financing CAPEX and OPEX is not economically feasible for the Government and is the reason behind the desire to tender for the O&M scope. In this context, the Government would be open to subsidizing the tariffs for social end-users. However, there is no clear tariff cap in the regulations, and no reference to such subsidy was included in the previous tender. Based on the budget set for rural electrification, the subsidy level is expected to have a cap of 20% of the tariffs proposed by private operators in their ESCO bids. Nevertheless, the Government noted that they would like to adopt a model that in time reduces the Government spending on mini-grid OPEX, with no plans for delegating the CAPEX component to the private sector in the near future. This can be considered a political decision rather than an economic decision since there is no studies detailing the exact cost of rural electrification.
Regulations	The Energy Policy, launched in 2015, states that ?rural electrification must rely on the renewable energies available in these localities. In addition, it is necessary to favor the cheapest energy resources in order to ease investment costs of potential projects and consequently the energy bills of the villager consumers.? On tariff collection regulations, the Government noted that one of the models previously used was "Standard Collectivity", where people in the same community all pay a standard cost for electricity services. It worked in some cases but additional assessments are required to validate the model suitability in the proposed pilot locations. The Government expressed interest in considering business models which combine commercial use of energy with rural electrification as a way to drive down tariffs for social users.

During the PPG consultation process, MERN indicated that the pilot location proposed in the Concept Note, i.e. the southern part of Balbala, may not be the most suitable for the AMP demonstration pilots. Two alternative locations were proposed, those are: Yoboki and Khor-Angar. The PPG national team

conducted field trips and gathered geographic, socio?economic and environmental data to provide initial insights on the proposed AMP pilots and their suitability for the proposed locations.

A. **Yoboki:** The village is located in the South-Western part of Djibouti, about 50 km from the town of Dikhil. With a population of about 2,000 persons, residing in about 250 households.

- The village has a gird connection that covers most of the households and is reported to be in excellent condition. The main source of electricity is a community diesel-powered generation plant with a total capacity of 100 kVA, as well as a small solar PV plant (1.4-1.6 kW) for a small dispensary.

- A management committee is responsible for O&M and for tariff collection at a monthly flat rate of DJF 2,500 (i.e. USD 14) per household for the supply of intermittent power for 6 hours/day (traditionally from 6 pm to midnight, used for lighting and ventilation). These households are equipped with breakers. The money is used to purchase fuel for the generator.

- The capacity of the existing generator is reported to be insufficient for the village demand. Households are facing severe voltage drops which leads to breakdowns in the equipment installed in the dwellings (such as refrigerators). In addition, there are many traditional huts (toukouls) scattered in the vicinity of the village with no connection to the local grid.

- The village has a total of 50 solar street lighting units, with some installed at community centers and playgrounds. Although the number could be said to be appropriate, but the lack of regular maintenance puts the need for additional units to enhance the illumination into question.

- The village has schools, shops, a water pumping station, community center and a dispensary, with some of these using stand-alone solar systems or diesel generators. There is also some income?generating activities in the village and the surrounding areas, e.g. small agriculture work, crafts, etc. Overall, the economic benefits for the village are noted to be extremely limited. A telecom installation exists but the mobile network is reported to be unstable.

B. **Khor-Angar:** Located in the north of the country (about 320 km from Obock), the village of Khor-Angar is a fishing village much smaller in size than the village of Yoboki. The village is inhabited by nearly 50 households for about 250 people.

- Existing infrastructure is limited to a containerized seawater desalination unit, financed by the Islamic Development Bank (IDB). The unit supplies water to the village, but also to a military base and a national coast-guard base located near the village. However, the equipment is reported to be in poor condition, with the technician operating the unit for only one hour per day.

- The village has no connection to grid-electricity. The villagers have no access to electricity with the exception of a few generators ? some of which are not working for lack of maintenance, and a small solar system which some households installed for their use.

- The Government recently initiated the ?Dry Land Project? which aims to build upon the villagers? experience and fishing and help them secure sustainable revenue streams. The project will tentatively support the establishment of an ice production facility (presently under construction), extending water supply pipelines, and other social development activities.

- In December 2020, the Djibouti Agency for Social Development (ADDS) installed about 15 solar street lighting units, but the number is reported to be insufficient to properly illuminate the village.

3) the proposed alternative scenario with a description of outcomes and components of the project;

The main objective of the AMP in Djibouti is to ?support access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low-carbon mini-grids in Djibouti, with a focus on cost?reduction levers and innovative business models?. The development challenge which the project aims to address is the need to increase the profitability of the solar?based mini-grid systems to encourage private sector engagement, while maintaining the end-user tariff in a range that is presently paid by communities residing in social housing complexes and peri-urban areas for grid-connected electricity. The business-as-usual scenario is the continuity of the utility?s monopoly of the off-grid energy market, slowing down the Government?s ability to achieve its renewable energy development and energy access goals and maintaining high levels of GHG emissions due to continuing use of diesel generators by off-grid users.

The project follows the theory of change developed in the AMP PFD. More specifically for Djibouti, the project aims to support the Government to create an enabling environment for innovative business models centered on cost reduction and demand simulation. The incremental reasoning underlying the project is that the implementation of de?risking (policy and financial) instruments will reduce, eliminate or transfer the risks faced by private investors in mini-grids in Djibouti, hence, reduce the costs of capital. This will reduce overall project costs and allow for profitable operation at a reduced tariff. In parallel, the project will also use levers to support the private sector to self-organize and become an active partner in the development of the mini-grid sector in the coming years, and promote regional collaboration through continuous interaction with the AMP Regional Project. These goals are achieved through supporting the Government with: (1) Performing techno?economic analyses to assess the market needs and suitability of different business models for Djibouti, while supporting the institutional capacity of the public sector, the technical capacity of engineers and technicians, and the quality assurance capacity of public organizations responsible for quality standards; (2) implementing two pilot solar PV-battery mini-grid projects to showcase the proposed model, integrating ice production - as a model for productive use, and the installation of stand-alone solar street lighting - as a complementary measure to enhance public safety, as well as establishing and capacitating mini-grid industry associations to strengthen private operators and developers and encourage their participation in

the mini-grid market and national dialogues; (3) designing appropriate financing mechanisms and building the capacity of small investors and domestic financial institutions to participate in the mini-grid market; and (4) running an effective digitalization strategy, Monitoring and Evaluation (M&E), Quality Assurance (QA) and Knowledge Management (KM) systems to oversee and guide project implementation.

As such, the project consists of four components, with one outcome under each component:

Component 1. Policy and regulation

As discussed in the previous section, the electricity sector in Djibouti is fully owned and operated by the government. The development on IPP laws and decrees has not yet materialized into private developers owning and operating their projects. In addition, on the scale on mini-grids, there are no laws to support Build-Own-Operate or similar mini-grid delivery models. The authorities have been trying to encourage private sector participation in mini-grid development, and ongoing projects, such as the GEF6 mini-grid development project, are tackling several aspects of policy development and tariff structure for off-grid energy development. Taking into consideration the obstacles these projects are facing, the AMP engages with the existing state-led mini-grid delivery model, presenting digital transformation as a non-disruptive intervention that brings together public and private actors and enable their collaboration through project-specific tenders and contracts. In parallel, it promotes the facilitation of a national dialogue on mini-grid delivery models and off-grid electrification to bring the parties to a common discussion and combine the efforts by different parties on the institutional and system levels. Once the mini-grid delivery model becomes familiar and the pilots showcase successful partnerships, the project will support suitable policies and regulations to scale investment around these delivery models. Hence, this component aims to build upon the GEF6 mini-grid development project by conducting more in-depth analysis of the commercial viability of the proposed regulatory framework and tariff structure. In addition, it tackles a few ingredients which are crucial for the longevity of any proposed delivery model, such as establishing a focal point to oversee all matters related to mini-grid sector development. During the implementation of the AMP in Djibouti, the focal point will be collaborating with the project team on the tasks related to improving the institutional setup of the mini-grid sector and enhancing the public sector capacity for engaging with private sector EPCs and ESCOs. As such, the capacity building activities directed towards capacitating staff members at the focal point will be conducted in the form of on-job training. The role of the proposed focal point extends beyond the lifetime of the AMP in Djibouti project. At project end, the AMP team will hand over any ongoing responsibilities to the staff at the focal point, such that they can serve as the main point of contact on future mini?grid projects, and ensure that each intervention in the mini-grid sector builds upon previous work. This component also involves the development of technical standards for low carbon mini-grid system components, and embedding mini-grid education in university certificates and vocational training programmes in Djibouti.

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.
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.
Output 1.3. Institutional set-up for rural electrification assessed to support the establishment of a focal point for mini-grid development, and institutional capacity building provided on technical, managerial, and regulatory issues.
Output 1.4. Public programmes (apprenticeships, certificates, university programs) to develop competitive, skilled labor market in the design, operation and maintenance of solar and hybrid mini-grids.
Output 1.5. Domestication of quality standards for solar mini-grid components, and institutional capacity of national authorities in-charge, i.e. standards organizations/bureau, strengthened.

Component 2. Business Model Innovation with Private Sector

This component focuses on the promotion of innovative ways to increase private section engagement in mini-grid sector development, which links to adopting a delivery model that makes economic operation possible. The baseline in Djibouti is government ownership, with an EPC delivery model for mini-grid development, where the Ministry of Energy and Natural Resources (MERN) hires an EPC company to design, supply and install mini-grids, then takes over the O&M and becomes responsible for distribution and tariff collection. However, the cost of financing, building and operating grid connected and off-grid systems is becoming too high to sustain and is limiting the Government?s ability to expand the investment in new power generation plants and infrastructure projects. This leads to the Government?s desire to create a delivery model that encourages private sector participation in the mini-grid sector.

Based on the initial analysis during PPG development, the team identified two viable options: (a) charging cost reflective tariffs, i.e. set tariffs at levels that are high enough for private operator to generate sufficient profit; or (b) charging tariffs that do not reflect the real costs with the Government subsidizing the operation to guarantee profitability to the contracted ESCOs. The proposed ?EPC+ESCO? delivery model envisages continuing with the business-as-usual for installation and commissioning, i.e. the government financing the CAPEX and entering into EPC contracts, yet delegating the O&M responsibilities to the private sector by entering into a second contract, awarded to an Energy Services Company (ESCO) to be responsible for O&M. The result of the studies presently conducted under GEF6 project, the proposed tariff structure, and how both are transformed into regulation, will form the basis for the decision on the delivery model to adopt for the AMP pilots.

The goal of the activities under this component is to provide a realistic example of the selected delivery model. Therefore, pilot projects will be implemented, consisting of solar PV-battery mini-grid systems, developed using the EPC+ESCO delivery model, or other - as may be recommended during implementation. The installation and commissioning of the mini-grid pilot systems will be accompanied by the establishment of an ice production facility which would receive its electricity needs from the mini-grid pilot to promote productive use. The pilots will also integrate the installation of stand-alone solar street lighting units, as a safety priority for off grid areas and a more cost-efficient alternative to extending connections from the mini-grid pilots for street lighting. During PPG development, MERN proposed to implement the pilot projects in Yoboki and Khor Angar. During Year

1 of the AMP project implementation, additional studies and site assessments will be conducted to confirm the suitability of the proposed sites, following which a detailed Procurement Plan will be developed. The implementation of the AMP pilot projects using the proposed model includes tendering procedure to ensure the technical and financial capacity of the contracted ESCO, having contractual obligations with financial penalties for poor performance, complemented by the digital systems to support government oversight and monitoring. These measures will include maintenance schedules involving the liability on equipment replacement for the full lifetime of the pilot systems. The contract may also include provisions for environmentally sound waste management, as will be advised in the project's SESP and ESMF.

The following table presents the roles of the different parties in relation to the pilot systems:

System owner	Source of funding	Developer	O&M
Government of Djibouti	GEF funds	EPC contract	ESCO contract

With regards to the technical assistance dimension of this component, it entails capacity building for private sector companies, with focus on potential bidders for low-carbon mini-grid EPC and ESCO tenders. To ensure the sustainability of the capacity building effort and the continuous improvement in private sector engagement and involvement in the mini-grid sector, the AMP will support the establishment of an industry association to become the hub for mini-grid knowledge sharing among companies and potentially responsible for carrying out post-project capacity building activities and ongoing communication with the focal point established under Output 1.3.

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

Output 2.1. Pilots for low-carbon mini-grids are developed, to demonstrate business models for off-grid electricity including productive use/innovative appliances, leading to cost-reduction in mini-grids.

Output 2.2. Capacity of potential tender bidders (private sector developers) strengthened to consider innovative business models and cost-reduction levers.

Output 2.3. Support provided to establish and grow a national industry association of private sector mini-grid developers.

Component 3. Scaled-up financing

The sustainability of the proposed delivery model depends on its commercial viability, but also on the funding opportunities available to the private sector players wishing to engage in the mini-grid sector in Djibouti. 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 existing and expected challenges potentially affecting the scaling up of investment in the mini-grid sector. The following are some of the aspects the 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;
- Capacity of national bodies to manage a funding program;
- Extent and favorability of any national mini-grid related policy and regulation;
- Potential for lobbying and policy guidance;
- A general assessment of the extent to which the political ecosystem is supportive of the mini-grid sector;
- 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 to support the design of a financing model suitable for the mini-grid market in Djibouti. Following which, capacity building support is provided to introduce the model to members of the domestic financial sector and local mini-grid operators. These activities are designed to complement the effort put in activities under the remaining components aiming to build an enabling environment for mini-grid development with higher incentives and reduced risks on ESCOs and financiers. The plan for mobilizing resources from public and private financial institutions envisions that the in presence of an institutional setup that is easy to understand, a well-defined focal point on the government side, a recognized body to represent the interests of private parties, and clear operational guidance for financiers and investors, will enable the coordination on mini-grid projects and facilitate sectoral development towards more adaptive decisions to the views of different parties. This is achieved by focusing on operationalization aspects, i.e. developing operational manuals for existing financing institutions and capacitating the different actors on the EPC+ESCO business model requirements and benefits. Furthermore, the digital transformation will also facilitate the engagement of communities and end-users and provide them with proper tools for knowledge sharing to be able to drive demand and hold ESCOs accountable. This will lead to more transparency for domestic financial institutions and small investors, leading to higher potential for their engagement in financing mini-grid projects.

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, provided for Mini-grid Funding Facility (MFF) or equivalent financial mechanism, under rural electrification agencies/funds, such as the National Development Fund (NDF) or the Guarantee Fund (GF).

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

Output 3.3. Capacity building provided to local mini?grid developers and investors on measuring and reporting on impact indicators, building credibility in impact investment as an asset class.

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

This component aims to ensure that the AMP in Djibouti 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 Djibouti 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

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

Output 4.2. Mini-grids digital platform implemented to run tenders and manage data from pilots, and to support mini?grids scale-up and cost-reduction.

Output 4.3. A Quality Assurance and Monitoring Framework (QAMF) for measuring, reporting and verification of the sustainable development impacts of all mini grid pilots supported, including GHG emission reductions, is adopted and operationalized based on standardized guidance from the AMP Regional Project. [1][1]

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).

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.

4) alignment with GEF focal area and/or impact program strategies;

The central ideas of the AMP Regional Project have influenced the contextualization of the components, outcomes and outputs introduced by the AMP in the Program Framework Document (PFD), such that the AMP in Djibouti continues to be aligned with the Regional AMP Project design, yet responsive and adaptive to the national context and needs in Djibouti. The following figure captures the four elements shaping the proposed strategy for the AMP in Djibouti, and the overarching Knowledge Management (KM) targets on the national and regional levels.

For the purpose of this document, ?mini-grid delivery model? is the term used to present the overarching framework designed by the government to specify aspects such as financing, ownership, operation. Under the designed delivery model, individual ?mini-grid business models? can be applied by respective developers/operators. 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, its importance to the project, and the current status of the minigrid delivery model in Djibouti. Different delivery models can be designed to respond to different contexts, inter-alia, the policy and regulatory framework in the country, procurement concepts and support mechanism, as well as the desired mini-grid business model(s) to be adopted by the government under the selected delivery model for mini-grid

development. In Djibouti, the Government has been adopting an EPC delivery model for mini-grid development, where the Ministry of Energy and Natural Resources (MERN) hires an EPC company to design, supply and install mini-grids, then takes over the O&M and becomes responsible for distribution and tariff collection. However, the cost of financing, building and operating grid connected and off-grid systems is becoming too high to sustain and is limiting the Government?s ability to expand the investment in new power generation plants and infrastructure projects. This leads to the Government?s desire to create a delivery model that encourages private sector participation in the mini-grid sector.

During PPG consultations, the proposed model was referred to as the ?EPC+ESCO? business model. This model constitutes continuing with the business-as-usual for installation and commissioning, i.e. the government financing the CAPEX and entering into EPC contracts, yet delegate the O&M responsibilities to the private sector by entering into a second contract, awarded to an Energy Services Company (ESCO) to be responsible for O&M. The tender will follow a cost-of-service pricing model, where ESCOs submit their most competitive end-user tariff in the financial offer, however, the model shall rely on the pricing strategy for rural electrification and tariff calculation structures presently under development by the UNDP GEF project titled ?Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti? ? closing in 2022.

5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;

The The total cost of the project is ***USD 18,911,347***. This is financed through a GEF grant of ***USD 3,071,347*** administered by UNDP, ***USD 50,000*** in cash co-financing to be administered by UNDP and additional support of ***USD 15,790,000***. The UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co financing transferred to UNDP bank account only.

	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	$ 479,195	$ 1,469,520	$ 658,241	$ 464,391	$ 3,071,347
Grant co-finance by GEF Agency: UNDP	$ 10,000	$ 15,000	$ 12,500	$ 12,500	$ 50,000
Loan co-finance by Donor Agency: World Bank	-	$ 15,790,000	-	-	$ 15,790,000
TOTAL	$ 489,195	$ 17,274,520	$ 670,741	$ 476,891	**$ 18,911,347**

6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

From a climate risk perspective, climate change almost universally drives an increased demand for power, whether for cooling, increased pumping of water, other aspects, however, the increased demand of energy generated from non-renewable resources make climate change worse. 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 GEF investment funds allocated for implementing pilot mini-grid projects for delivery model demonstration under the AMP in Djibouti is USD 1,265,312. The amount will tentatively be invested in the following pilot projects:

- Two solar PV-battery mini-grids installed and commissioned in Yoboki and Khor-Angar (USD 825,656),

- Ice Production Facility is established, with connection to the mini-grid in Khor-Angar (USD 314,000), and

- Stand-alone solar PV lighting poles are installed in Yoboki and Khor-Angar (USD 125,656).

The exact pilots and fund split will be validated using the findings of additional assessments during implementation

The implementing of mini-grid pilots aims to showcase the EPC+ESCO delivery model for mini-grid development. The potential integrating of an ice production facility aims to demonstrate the productive use potential of the model proposed. The potential inclusion of solar street lighting was proposed during PPG consultations, where government parties emphasized the impact of such intervention on the safety of people residing in off-grid areas. Choosing to install stand-alone solar street lighting units was proposed as a more financially viable alternative to extending the distribution network from the mini-grid systems to non-renewable lighting poles, noting that the maintenance services for stand-alone units, including regular repairs and replacement, must be considered in the business plan for the pilots and referenced in the ESCO contracts, as appropriate. This assumption is to be revisited as part of the needs assessment exercise, when the pilot location is selected and drawings for cost-efficient distribution networks can be developed. A detailed Procurement Plan for the AMP in Djibouti will be developed during Year 1 of implementation when further studies are conducted and the exact location and systems? capacity are identified.

Based on the findings of the field visits conducted during PPG development to Yoboki and Khor?Angar, it is assumed that the pilot in Yoboki will constitute adding solar PV-battery systems to an existing diesel-generated mini?grid, while Khor?Angar can be considered a greenfield. However, the final locations and types of the pilots will be decided at project start. Similarly, the exact financing mechanism to be used for the release of this investment fund will be decided during

implementation, noting that it shall put in place protections for the efficient and appropriate use of donor funding, such as additionality and minimal concessionality considerations, third-party ownership, etc., based on which the level of GEF financial support for pilots will be determined. Such methodological assessments will be part of an overall package of financial due diligence/assessments that will be performed during the tender process to select pilot sites/developers.

Using the GEF investment, the project is expected to implement pilot project(s) with a total solar PV capacity of 0.84 MW, resulting in direct GHG emissions mitigation of about 39,717 tCO_2eq. During the 20 years following project closure, the project is expected to result in 36,000 tCO_2eq of indirect GHG emissions mitigation. [1] The detailed calculation is presented in Annex 12 of the Project Document.

7) innovativeness, sustainability and potential for scaling up.

Innovativeness

In a market where all power generation projects are presently owned and operated by the public sector, innovation plays a key role in understanding previous trials that have been implemented to encourage private sector participation in mini-grid projects and filling the gaps limiting the financial feasibility of renewable energy adoption in the mini-grid sector. Therefore, the AMP in Djibouti starts the work on each output by investigating the developments accomplished by previous and ongoing projects, and analyzing their outcomes to find the most suitable way for enhancing the competitiveness of low-carbon mini-grids. Building on the assessments and discussions during PPG development, innovative ways have been proposed to create an enabling environment. This includes the proposal to establish a national focal point for mini-grids as a way of ensuring that the knowledge base is concentrated and can be analyzed and disseminated through a single point to all other actors in the sector.

The project also presents a mini-grid business model that is innovative to the Djibouti market, yet contextualized to the specific needs expressed by the Government during PPG development. The proposed EPC+ESCO builds upon the public sector experience with EPC tenders and contracts, introducing ESCOs as a complementary service provider for the model to be complete. The proposed pilots aim to demonstrate this model and showcase the impact of balancing government ownership with profitable operation by a private sector company. Recognizing that this is a nuanced model for the market in Djibouti, the project focuses heavily on capacity building for public and private actors to ensure smooth transition into the newly proposed model.

In terms of technological innovation, and in addition to the digital transformation described above, the AMP pilot systems will promote hybridization technologies following best practice specifications for hardware/software and data sharing. This includes abiding by the following requirements per project 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

- Various data cables and installation material

- Optional: 24V backup battery

- Optional: Cabinet for the complete monitoring system

- Industrial internet router

- Industrial or high quality Ethernet Switches

- Smart meters per connection

Sustainability

From an operational sustainability perspective, the additional outputs tackling the establishment of a national focal point and industry association for mini-grid development, are not only aiming to facilitate project implementation, but also increase the medium and long-term sustainability of all project outcomes. Hence, sustainability will be one of the main priorities in undertaking the work towards supporting the institutional setup for the mini-grid public sector, capacity building of public and private parties, as well as dedicating resources to institutionalizing the knowledge production through creating university and vocational training programmes for mini grid education.

On the piloting scale, sustainability is more about ensuring steady operation of the system for the full duration of its lifetime, including sound operation and maintenance of system component. This is guarded through three aspects of pilots' development: (1) the proposed model, where the operator will enter into an ESCO contract with the government and will be legally bond to conform with the O&M procedure required for best performance, (2) enhancing the institutional capacity of government staff to be able to monitor the performance of the pilot systems, and (3) empowering communities to oversee the operation of the mini-grid systems in their villages and report on any misconduct by the ESCOs. These aspects will be complemented by government oversight on system operation and performance through the digital transformation activities under Component 1 of the AMP in Djibouti.

Furthermore, Component 4 dedicates resources to knowledge management 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 Djibouti 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 protect off-grid 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. Moreover, 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 works with domestic financial institutions and small investors, 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 Djibouti does not stop at donor funded projects. At project end, the business model will be in the hands of the Government of Djibouti, managed by a national focal point in the energy sector that can work on resource mobilization strategies with the domestic financial sector to attract national and international private sector EPCs and ESCOs. 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. The adoption of a business model suitable for replication is key to achieving the indirect emissions reduction targets of the AMP in Djibouti, especially since the government has tried tendering one of the existing mini-grid systems for private O&M services but the was no interest in the market due to the system's small size and remote location. Recognizing that the AMP's ability to create a positive showcasing of a pilot project and an enabling environment for private sector participation are key to scaling up impacts and achieve higher indirect GHG reductions, the outputs and activities have been revisited to ensure their contextualization and complementarity, while the pilot project design was modified to cover a broader range of services to community members and enable ESCO to charge tariffs higher than the social tariff for low tier residential users.

There were also measures that have been expanded into independent outputs instead of activities tackling only the pilot 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 pilots, but it paves the way for further public-private partnerships going forward. Similarly, the implementation team for the AMP in Djibouti will ensure the use of high quality components for the pilot systems, 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 delivery model and giving confidence to the private sector for engaging with it using innovative business models.

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 Djibouti:

? **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.

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[1] The national project will not need to ?develop? their own QAF; 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.

[2] 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.

1b. Project Map and Coordinates

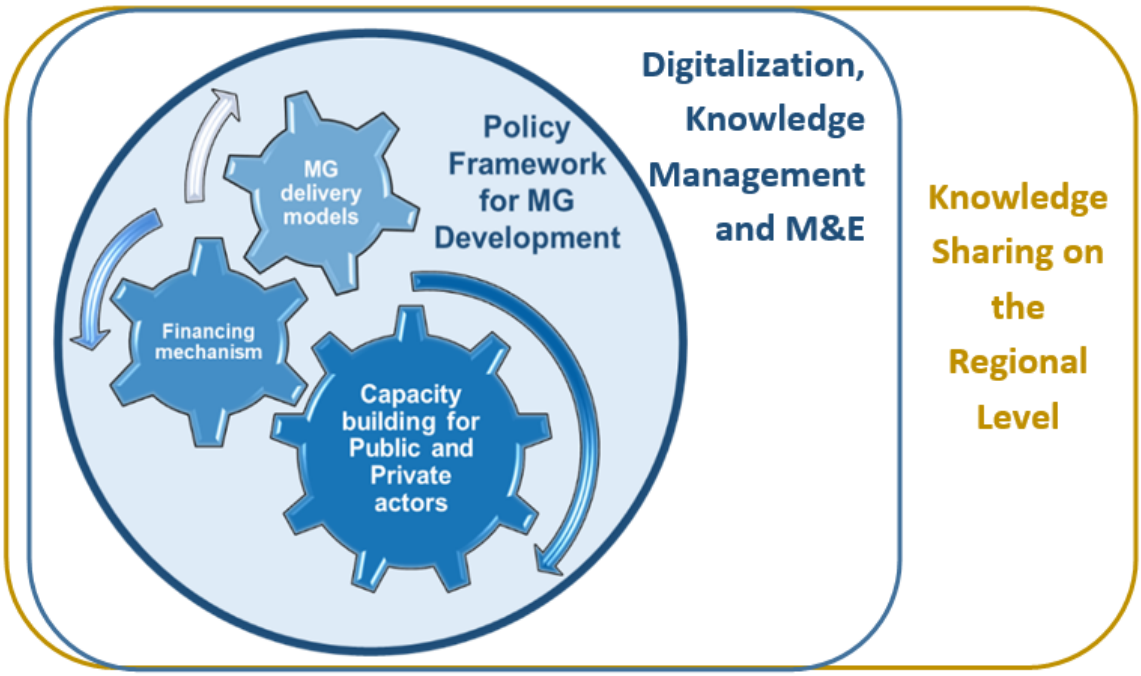
Please provide geo-referenced information and map where the project interventions will take place.

Maps for project location are provided below in Annex E.

1c. Child Project?

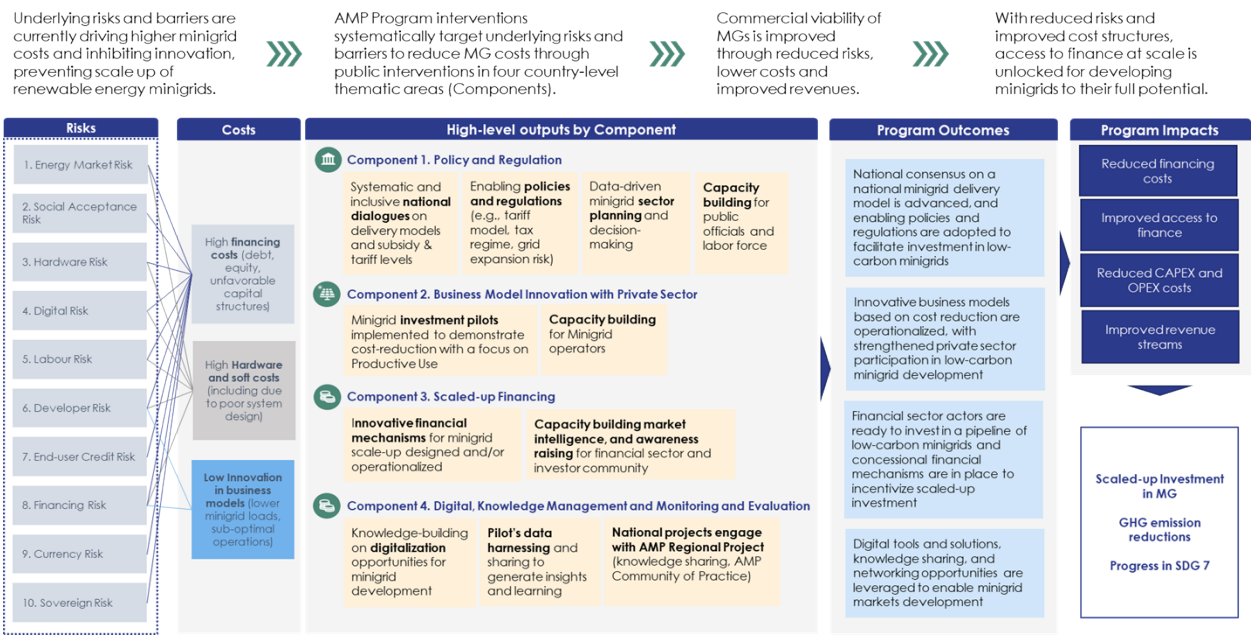
If this is a child project under a program, describe how the components contribute to the overall program impact.

The AMP in Djibouti follows the AMP?s overall ToC, developed in the PFD, which acknowledges that the initial capital investment required to develop solar PV-battery mini-grids is currently not competitive with fossil-fuel based alternatives. The AMP envisions that once the right frameworks to secure long-term investment in renewable-based mini-grids is provided, solar-based mini-grids will be competitive, and 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. In this context, financial de-risking and private sector participation was one of the key themes guiding the strategy of the AMP in Djibouti as demonstrated in focus on increasing the funds dedicated to establishing a national focal point and industry association for mini-grids in Djibouti. The technical capacity building on solar mini-grids to encourage local knowledge production is supplemented by capacity building on financing mechanisms and instruments. Furthermore, the project will collaborate with the knowledge networks and Communities of Practice (CoP) to be established in different countries participating in the AMP and shall make best use of the online resources, regional conferences and exchange missions to be organized by the Regional AMP.



Overview of the proposed design for the AMP in Djibouti

In addition, components under the AMP in Djibouti are in line with the harmonized results framework developed by the AMP Regional Project to provide guidance to participating national projects and streamline program implementation on the regional level. Furthermore, and 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. The figure below presents the ToC diagram for the AMP.



Theory of Change (ToC) diagram of the AMP

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations

Indigenous Peoples and Local Communities

Private Sector Entities

If none of the above, please explain why:

The The PPG development process involved conducting several consultation meetings and workshops with public authorities and private sector parties in Djibouti, 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 in 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 MUET, 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 Djibouti 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 Djibouti.

Furthermore, the proposed strategy for the AMP in Djibouti intends to capitalize on the project being part of the AMP Regional Project and use all possible opportunity for South-South and Triangular cooperation. Hence, the AMP in Djibouti 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 ?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.

Please provide the Stakeholder Engagement Plan or equivalent assessment.

The following table presents a summary of the preliminary Stakeholder Engagement Plan (SEP) for the AMP in Djibouti as presented in Annex 9 of the Project Document. The SEP is planned to be updated at the time of site selection for the pilot systems:

Table 1. Preliminary SEP for the AMP in Djibouti (to be updated at the time of site selection for the pilots, i.e. as part of updating the safeguards for the project)

#	Stakeholder Group	Role/Relevance	Means of engagement	Interest in the project	Influence on the project	Participation capacity	Perception of problem
1	State and local government authorities, i.e. public sector entities	Implementing and project partners	Regular meetings and consultation workshops	The public sector has been involved in project design, and will lead the work during implementation.	High	High	Will require skills, activities and measures new to their usual practice and scope of sectors.
2	Private sector companies involved in the project?s pilots	Project partners and direct beneficiaries	Regular meetings and consultation workshops	Given the proposed model for mini?grid delivery, the private sector is crucial for project success.	High	Moderate	Lack of certainty in the market nationally to de-risk investment
3	Development partners	Co-financiers	Regular meetings and consultation workshops	The project is designed to build upon ongoing projects and collaborate with development partners to avoid duplication to the extent possible.	Moderate	High	Will require skills, activities and measures new to their usual practice and scope of sectors.
4	Communities in pilot location	Direct beneficiaries and affected persons	Regular meetings and consultation workshops	End-users of electricity to be generated from the pilot projects.	High	Low	New set of problems for some and opportunities others.
5	Academics, educational institutions and vocational training centers	Direct beneficiaries	Regular meetings and public events	Recipients of training and future implementers of the academic certification programme.	Moderate	High	To be determined

6	Financial institutions and small investors	Direct beneficiaries	Regular meetings and public events	Recipients of training and future implementers of innovative financing schemes and incentive mechanisms.	High	High	Lack of certainty in the market nationally to de-risk investment
7	Private sector companies not involved in the pilot project(s)	Indirect beneficiaries	Public events	Affected by project outcomes and potential beneficiaries of replication.	Moderate	Moderate	To be determined
8	Industry groups (agriculture, fisheries, manufacturing)	Indirect beneficiaries	Public events	Affected by project outcomes and potential beneficiaries of replication.	Low	Moderate	To be determined
9	Communities in non-pilot location	Indirect beneficiaries	Public events	Affected by project outcomes and potential beneficiaries of replication.	Low	Low	To be determined
10	NGOs and civil society groups	Indirect beneficiaries	Public events	Especially the groups working on energy access, climate change, renewable energy development, etc.	Moderate	Moderate	Disadvantaged groups are usually left behind/outside of the project benefits (i.e. women, poor, disable, indigenous?)
11	Other groups	To be identified as part of the site selection assessment for the pilot(s) location.					

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

See Annex 9 of the Project Document.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier;

Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

In Djibouti, the situation of women has changed, but there are still disparities between men and women, particularly in rural areas. Disparities exist in the labour market, education and decision-making spheres, whether at the level of public administration, at the community level and within households. These disparities can be explained in part by the Arab-Muslim tradition prevailing in the country, even though the population comes from various millennia-old cultures that relate to its main community components, namely Afars, Arabs and Somalis. This Arab-Muslim tradition is patriarchal and patrilineal. It places, socially, the woman under the authority of the man.

At the political level, Djibouti's constitution guarantees equality before the law regardless of language, origin, race or religion regardless of gender and prohibits discrimination on the basis of sex. Djibouti ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1998. Unlike other members of the Arab League, Djibouti has ratified CEDAW without reservation. Moreover, Djibouti has a national strategy for gender equality 2011-2021 that succeeded the National Strategy for the Integration of Women in Development (2000-2010). The current National Gender Equality Strategy focuses on promoting equal access to social services, including education and health, and prioritizes programmes to improve women's literacy.

Looking at the links between gender, access and control of natural resources, particularly in the energy sector, we find that there are a number of disparities in the world and in Djibouti:

1) The unequal access to and control of natural resources: Women continue to be hampered by structural constraints and gender norms related to access and control of land, water and other productive goods and biological resources. Even when the law guarantees women equal rights to men, many women have less control over natural resources. Research shows that if women had the same access to resources as men, agricultural productivity in developing countries could increase by 20-30%, reducing poverty and improving women's ability to support their families, and sustainable management and use of natural resources.

2) Unbalanced participation and decision-making in environmental planning and governance at all levels: gender standards, greater time constraints for women and other structural constraints continue to prevent women from having the same opportunities as men to make decisions in the management and sustainable use of natural resources. Bridging gender gaps in participation and leadership in decision-making, from local to national, can help make institutions and policies more representative, and help women better participate in decisions that shape environmental planning, policy development, and sustainable solutions and practices.

3) The unequal ability to benefit and services socio-economic: In rural areas in particular, women do not have the same opportunity to access income generation opportunities, credit and technology as men. In addition, women often face more barriers than men to accessing funding, training and information. Expanding women's socio-economic benefits can make a significant contribution to improving the environment in areas such as natural resource management, land degradation reduction, renewable energy, sustainable fishing, etc.

Added to this are the negative effects of the accumulation of unreliable energy on the health and well-being of the population, and in particular of women and girls who are primarily responsible for the collection of biomass fuels such as charcoal, wood and agricultural waste. They are at risk of sexual violence when they search for firewood for long hours, travelling several kilometers. The risk of indoor air pollution from the fumes of traditional stoves also exists. Finally, the lack of reliable energy services seriously affects women's activities in the micro-enterprise. The Africa 2018 Sustainable Development Report indicates that the time lost by women and girls to the stress of poverty is compounded by their disproportionate lack of access to affordable and sustainable energy sources.

Given these barriers, this project will be a transformative potential that will bridge these gender gaps and access to reliable energy by (i) more effectively mobilizing women to participate in the design and implementation of the project and environmental efforts, taking into account (ii) women's skills, knowledge and experiences, training (iii) women in the solar mini-network implementation chain in Djibouti and the project area, as well as women's access to reliable information. Also, increased supports will be offered specifically to women to strengthen its role as applicants and primary users of reliable energy and support and support activities to strengthen women's empowerment so that they can benefit full of the project will also be designed and developed.

Additional details on the project?s approach towards gender mainstreaming and women empowerment can be found in the Gender Analysis and Gender Action Plan presented in Annex 11.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

During Given the project?s focus on commercial viability and the promotion of the EPC+ESCO delivery model for low carbon mini grid development, the collaboration between public and private parties will be key to successful implementation of the project activities. Hence, the AMP dedicates part of the GEF funds to activities with representatives in each sector as direct beneficiaries and ensures both sectors are part of the implementation of activities under each component. For example, the AMP dedicates resources for establishing a focal point to be hosted by a national party, but also dedicated resources to the establishment of an industry association for private sector companies. Capacity buildings activities target staff members in the public sector, but also local practitioners and labor, as well as potential bidders for EPC and/or ESCO tenders. Similarly, financial capacity building is planned to engage with national financial institutions, but also small investors. Etc. The collaboration with the Regional AMP Project, through the CoPs, sharing reports or attending meetings, enhances the potential for regional partnerships and continent-level knowledge sharing and dissemination.

With respect to partnering with international organizations, the last decade witnessed several interventions by development partners financing projects in the energy sector in Djibouti and attempting to expand the role of private sector companies in grid-connected and off-grid power generation. The interventions took the form of grants and loans for pilot projects, as well as technical assistance to support the development of regulations and building national capacities in the public and private sectors. This includes an ongoing project financed by GEF during the previous round. The GEF6 project is dedicated to the development of solar mini-grid policies and regulations, as well as the design of tariff structures for off-grid systems. The strategy developed for the AMP in Djibouti emphasized the necessity to work hand-in-hand with the GEF6 project team and other development partners to ensure complementarity and avoid duplication.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
1	The project is partially reliant on progress to be made by the GEF6 mini-grid project.	Strategic	In the lack of a regulatory framework and tariff structure, private sector participation in the mini-grid market will be limited. *Level: High* *Likelihood = 4* *Impact = 5*	The operationalization of any business model for mini-grid development requires an enabling environment and a clear regulatory framework within which private sector actors can operate. To avoid duplication in the allocation of funds, the AMP does not engage directly with activities planned under GEF6 mini-grid project, such as: - Output 1.1: Comprehensive but simplified regulatory framework to unlock the off-grid market - Output 1.2: Tariff setting, and design of financial support To mitigate the impacts of GEF6 progress on the AMP, the Project Document proposed the promoting of a specific business model, i.e. EPC+ESCO. The recommendation was developed in consultation with national stakeholders and shall be revisited at project start based on the latest progress on GEF6 implementation. Furthermore, several studies will be conducted at project start, which will rely on outcomes from GEF6, if available. This approach aims to ensure complementarity, while avoiding the risks of direct sequencing.	MUET, in their capacity as the project?s IP (and the IP for the GEF6 mini-grid project)

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
2	Inability to maintain the political will and commitment to engaging private sector actors in the electricity sector and mini-grid service delivery.	Political	Without political will, market openness will not be achieved regardless of the progress achieved on other project activities, which jeopardizes the progress on the overall objective. *Level: Substantial* *Likelihood = 2* *Impact = 5*	The PPG consultations involved extensive discussions with government parties to ensure that the AMP is designed to address the country?s need and develop a strategy that is in line with national plans for the off-grid sector. During implementation, and in addition to overall stakeholder engagement, a clear output to work on the institutional arrangement and the establishment of a focal point for mini-grid development has been added to the project strategy and another output for establishing an industry association for mini-grid EPC contractors and ESCOs. The mitigation of this risk, in case of occurrence, will be to redirect funds from short-term activities towards these two medium and long-term outputs as a way of enhancing the readiness of the market for actual projects once the Government regains the commitment to promoting solar mini-grids.	MUET, in their capacity as the project?s IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
3	Lack of interest by financial institutions and investors to participate in financing the mini-grid development.	Financial	Without funding opportunities, the competitiveness of solar PV-batteries mini-grid systems will continue to be low. *Level:* *Substantial* *Likelihood = 3* *Impact = 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, and (2) expanding the ability of financial institutions to mobilize resources from international developers and small investors. In case financial institutions could not be properly engaged in capacity building activities during the AMP lifetime, the activities will be replaced with ToT to the focal point staff and industry association members, such that they assume the responsibility of course delivery when the enabling environment is strengthened.	MUET, in their capacity as the project?s IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
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: - Change in national priorities and context, - Procurement delays due to restrictions on imports, affecting the pilot projects, - Hindered communication due to COVID-19, and - Exposure risks for the project team, consultants, partners, and communities during implementation. *Level: Moderate* *Likelihood = 4* *Impact = 3*	As in other countries, the Covid-19 pandemic has placed the key and fragile sectors of the Djiboutian economy under severe stress conditions over the past year. Key sectors such as the productive industry, the service industry, transport (ports and free zones), etc., experienced a total or partial shutdown amid restrictions imposed by the government to limit the spread of the pandemic across the country. Hospitals, health centers and dispensaries have been inundated. The COVID-19 pandemic has also severely influenced local SMEs. The socio-economic impacts assessments and preliminary analyses show that 80% of formal businesses were negatively affected by the pandemic, 39% of businesses saw a decrease of 75% in their turnover between March and July 2020 vis-?-vis the same period last year, and 50% of business owners laid off 75% of their employees. This reality implies that the large enterprises lost their skilled and productive employees, which will result in a prolonged economic downfall for themselves and Djibouti at large. The severe economic impact trickles down from the major enterprises to local MSMEs, and most unregistered informal businesses who are more susceptive to this socioeconomic crisis. These MSMEs and informal businesses are the entities that will be targeted under this activity. Furthermore, the pandemic, and the consecutive lockdown, abruptly deprived public income and increased public expenses to provide care to the population. It is estimated that more than 10,000 jobs have been lost: including both in the formal	MUET, in their capacity as the project?s IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
5	Lack of coordination amongst various stakeholders and partners involved in the mini-grid sector	Organizational	Without intra-government collaboration and consensus among stakeholders, all project activities will be more challenging and less impactful. *Level: Moderate* *Likelihood = 3* *Impact = 3*	The AMP is designed to promote an inclusive strategy for developing the mini-grid sectors. Three outputs are dedicated to capacitating the public sector, private sector and financial sectors and supporting them with self-organization, i.e. national focal point, industry association, and capacity building for domestic financial institutions. In addition, the AMP in Djibouti will work in close collaboration with the Regional AMP on establishing knowledge networks and CoPs. These activities will help mitigate the impacts of general lack of coordination and pave the way for long-term sound governance and development in the mini-grid sector.	MUET, in their capacity as the project?s IP

#	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, energy access will continue to rely on the Government?s ability to extend the national grid or build and operate off-grid systems. *Level:* *Moderate* *Likelihood = 2* *Impact = 4*	In the baseline, private sector is not a key player in the delivery of energy services to end-users. However, the need for mini-grid systems for off-grid locations in Djibouti presents an opportunity for private developers, if the engagement is introduced using a commercially viable model, with elements of technical and financial support. Lack of cooperation could potentially be manifested in the form of refusal to participate in EPC or ESCO tenders. 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. To mitigate this risk, several outputs were dedicated to working with private actors. In addition, part of the GEF funds is allocated to the development of a pilot project to showcase the proposed model and encourage other developers to replicate the model on future projects.	MUET, in their capacity as the project?s IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
7	Educational and training institutions are unable to integrate mini-grid-related courses in their curricula.	Operational	Without institutionalized technical capacity building, ESCOs will not be able to operate and maintain the developed systems. *Level:* *Moderate* *Likelihood = 2* *Impact = 3*	The technical capacity of local companies and their knowledge of solar systems was identified as one of the major gaps preventing private sector engagement in the mini-grid sector. Integrating mini-grid courses in existing engineering schools and vocational training programmes aims to build upon existing knowledge-base and ensure sustainability in course delivery. In case agreements with these institutions could not be made, either the focal point or industry association shall assume the responsibility of course delivery in the form of an independent mini-grid training programme until mainstreaming in existing curricula can be achieved.	MUET, in their capacity as the project?s IP
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 Likelihood = 3 Impact = 3	This is an external risk to the project that will be mitigated in the context of a variety of other third-party activities form 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.	MUET, in their capacity as the project?s IP

#	Description	Risk Category	Likelihood (L) & Impact (I)	Risk Treatment / Management Measures	Risk Owner
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 Likelihood = 4 Impact = 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 sites. 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.	MUET, 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 Likelihood = 4 Impact = 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.	MUET, 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 Likelihood = 3 Impact = 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 sites. 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.	MUET, in their capacity as the project?s IP

[1] 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)

[1] 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)

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

Implementing Partner (IP): The Implementing Partner for this project is the Ministry of Urban Planning, Environment and Tourism (MUET) in Djibouti.

The AMP in Djibouti will follow the National Implementation Modality (NIM), where Ministry of Urban Planning, Environment and Tourism (MUET) will be the Implementing Partner, 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.

Execution Support: The UNDP will provide country support to the IP during implementation, per the signed LoA from the GEF OFP (provided in Annex).

Project Management Unit (PMU): MUET will also be responsible for the creation of a PMU (based at MUET), where a minimum of two full time staff members will be hired to fill the positions of Project Manager and Administrative/Financial Assistant. For quality assurance, 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 to the UNDP CO. Furthermore, the UNDP-GEF 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.

The PMU will also be responsible for staying up to date with progress on ongoing project that are related to the mini-grid market development in Djibouti and liaising with focal points to ensure proper collaboration and complementarity. This includes close follow up of the progress on the GEF6 project and other GEF-funded projects in Djibouti. The PMU will also strive to make information on their progress available for others to build upon when embarking on the design of new projects.

Management arrangement:

To ensure sound management of project implementation and continuous engagement of stakeholders in all project activities, MUET will establish the following committees at project start:

- Steering Committee/Project Board

Consisting of representatives from MUET, MERN, UNDP CO, as well as representatives from the Department of Social Affairs, Chamber of Commerce, the Ministry of Higher Education, the Ministry of National Education, the Secretariat of State in charge of decentralization, the Directorate of Fisheries (ice production), the Ministry of Women and the Family, civil society, regional authorities, etc. The role of the Board is to oversee project development, support sound governance, ensure M&E procedure is followed and support continuous collaboration with the Regional AMP. Board meetings will be held every six months. Additional meetings may be scheduled if required by the PMU during implementation. At the end of the first year of implementation, the entity selected to host the focal point for mini-grid development should be identified. The PMU should ensure this entity is represented on the Project Board.\

- Technical Committee

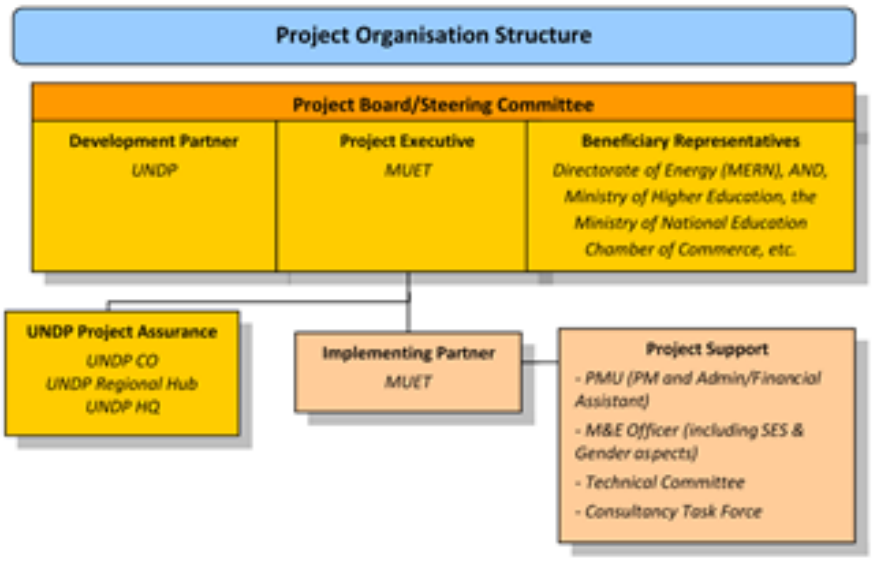
This will be a sub-committee of the project?s Steering Committee in which technical institutions related to the energy sector will be represented with the necessary expertise, i.e. representatives of ministries, the Rural Electrification Department under the Energy Directorate, private sector, academia, and NGOs. This committee is expected to meet more frequently than the Project Board, e.g. quarterly, and will be responsible for reviewing the studies and assessments which the project will generate, and advising the PMU on strategic issues and technical aspects affecting project implementation.

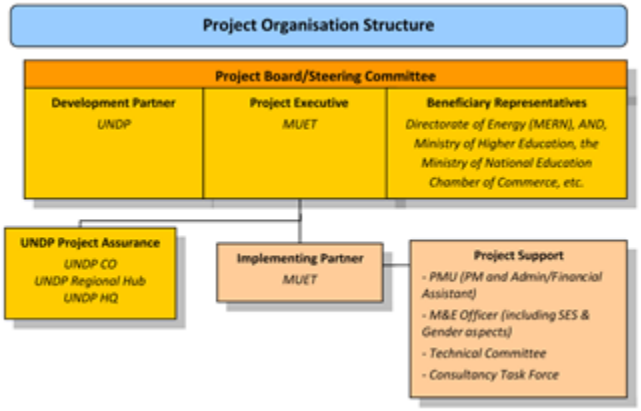
- Consultancy Task Force

Consisting of international & national experts taking the lead on specific technical assignments and collaborating to ensure the homogeneity of the overall output. The Project Coordinator, supported by the consultants to be in responsible for KM activities, will be responsible for bringing the consultants together and ensuring that their work is complementary.

Representation on the AMP Regional Project?s 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 steering committee meetings via video-conference. The representative of the AMP in Djibouti project on the AMP Regional Project board will be the *Implementing Partner; MUET*. It is expected that the AMP Regional project board will meet a maximum of twice per year.

The following chart shows the proposed organizational structure for the AMP in Djibouti.





7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The following present a list of policy instruments and national plans that are relevant to the mini-grid sector:

- Vision 2035 (launched in 2014): Requires a transition to 100% renewable energy within a decade. The 2020 target has not been met. Several development banks offered willingness to support solar and wind projects, but private investors are not yet to come forward.
- Electricity production strategy: Existing document elaborated in 2016, never validated as government's strategy.

- Energy Policy (launched in 2015): States that ?rural electrification must rely on the renewable energies available in these localities. In addition, it is necessary to favor the cheapest energy resources in order to ease investment costs of potential projects and consequently the energy bills of the villager consumers.?
- Electricity transmission master plan by 2033: Focusing on utility scale.
- Independent Power Producers (IPP) law (loi n?88/AN/15/7?me L) (launched 2015), and Complementary Decree to IPP law (issued in 2018):
  - In March 2015, the Government passed the IPP law (loi n?88/AN/15/7?me L) enabling private sector to enter the market of electricity production in Djibouti. The transmission and distribution of electricity remains under the monopoly of the EdD (EdD is the power utility, responsible for generation, transmission, and distribution, but it operates only in urban cities).
  - In Nov 2018, a new decree for IPPs in rural areas was adopted, allowing private operators to build, run and sell its electricity at the village level. However, the electricity tariffs are unilaterally fixed by the Ministry of Energy which gives the license.
  - Since the notion of IPP participation under a PPA with EdD was introduced, no direct investment has been recorded because the price offered by EdD, aligned to the 0,07$ of the Ethiopian hydroelectricity grid, is far too low to justify the risks.
- Laws encouraging development of renewable energy sector are disseminated in several laws, In the IPP law (88) for example, the monopoly of the national utility is broken and even large self producer are authorized (where in the past only the utility were allowed to produce, transport, distribute and commercialize the electricity) as well as small to domestic self-production which are all encouraged

The impact of the global health tragedy expressed the weakness of the electricity sector which depends on imports of petroleum products and electricity to meet the country's electricity needs. Officially, the national power generation based on thermal power generation covers around 40% of the country's demand and the remaining 60% is imported from Ethiopia. It is predicted that more than 500 MW of new electrical capacity will be needed to meet growing demand over the next decade. Over the past decade, the Djiboutian government has developed various documentations (laws, decrees, strategies and roadmaps) as well as the organization of think tanks and numerous workshops on the best way to meet the challenges of electricity infrastructure in drawing on private sector funds. One of the valuable results expressed in the country's vision is the country's goal of obtaining 100% of its electricity needs from renewable sources by 2030.

In rural areas, multidimensional poverty strongly handicaps the anchoring of populations in the national economy. The development of rural electrification aims to provide Djibouti with modern, affordable and sustainable energy services in the optics of SCAPE and Vision 2035 likely to bring the rural economy to acceptable levels of development and eradicate or alleviate the effects of the persistent poverty of rural populations. It should also stimulate the creation of decent jobs, participate in gender emancipation and help curb the rural exodus. The rural electrification strategy resulting from the government's collaboration with the EU through the AMCC (Global action against climate change) program, is fully inspired and formulated from the two concepts listed above, based on the liberalization of the electricity sector and the ambition to harness electricity needs from renewable sources. During the Covid-19 restrictions, the effectiveness of these two actions was confirmed by the high resilience of power plants based on renewable energies installed in rural areas which demonstrated the exceptional quality and service reliability of hybrid power plants (solar PV + battery + generator) as in As-Eyla. Other power plants in villages that use diesel generators for power generation were experiencing sporadic quality service due to the disruption of the diesel fuel supply chain to these villages, resulting in a severe shortage of electricity supply.

Finally, the project is also in line with the Nationally Determined Contribution (2015) and Second National communications (2013) to UNFCCC. Both aims for sustainable and low carbon emission development, especially through the deployment of Solar PV equipments.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Part of ensuring the sustainability of project activities and prolonging its impact beyond the project duration is to maintain a system of monitoring, evaluation, knowledge sharing, and knowledge dissemination. The information contributing to knowledge production will be collected in an organized manner and constantly feeding the project operation as well as the design of new interventions. More specifically, the outcomes under Component 4 serve to ensure that knowledge management, monitoring and evaluation are accounted for as independent tasks, but also integrated in all aspect of project implementation. This includes project participation in the Communities of Practice (CoP) to be established and managed by the AMP Regional Project. To overcome the COVID restrictions, many of the tools developed under the Knowledge Management (KM) system will take the form of online portals, reducing in-person contact and ensuring the work can proceed in case there continues to be restrictions on mobility during project implementation. More details on the deliverables, timeline and budget for the KM scope of project implementation are presented in the Results Framework and M&E plan under Component 4.

As such, part of the linkage of the AMP in Djibouti to the AMP Regional Project will fall under the implementation of activitites under Component 4. Notwithstanding, 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.

Under Component 4, the AMP will also develop 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. 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. The indicative specifications for the Project's Digital Platform are presented in the following table.

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

Functionality	Details
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.)

Once the digital platform is up and running, it will be announced as a government platform which can be used to run ESCO tenders seeking O&M services for existing mini-grid systems, including the system developed under the GEF6 project fund.

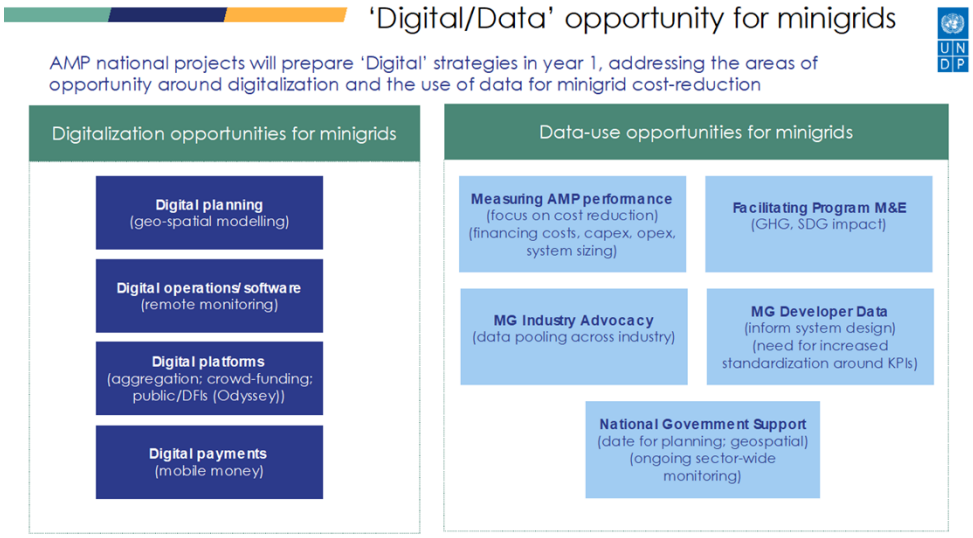
Digitalization of mini-grid development also provides an opportunity for mini-grid cost reduction A key mechanism for realizing this opportunity is the development of a digital platform for tendering and mini-grid monitoring. This digital platform will provide key functionality in terms of acting as the (i) national digital convening platform for key minigrid 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. Hence, the AMP in Djibouti includes an output for implementing a digital platform for tendering and data management of mini-grid systems (See Output 4.2 in the section below). The platform operation will be linked to the work of the focal point for mini-grid in Djibouti (to be established under Output 1.3) and other existing tendering procedure at the Ministry of Energy and Natural Resources (MERN) as the ministry in charge of energy projects. The following text box presents the initial specifications for the digital platform to be implemented.

Box 2: Digitalization 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.



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.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

The AMP in Djibouti will follow the National Implementation Modality (NIM), where Ministry of Urban Planning, Environment and Tourism (MUET) will be the Implementing Partner, 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. The UNDP will provide execution support to the IP (MUET) during implementation per the LoA letter from GEF OFP (see Annex 2 of the ProDoc).

Ensuring that the M&E plan is implemented will be the responsibility of the M&E Officer (member of the Project Management Unit), reporting to the Project Manager. For quality assurance, 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 to the UNDP CO. Furthermore, the UNDP-GEF 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.

Furthermore, M&E is a key area of interface between the AMP national projects and the AMP regional Project. The latter can support the PMU to undertake planning, coordination, management, monitoring, evaluation and reporting. Details on these linkages are provided below:

1) 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.

2) 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, Risks Matrix, and Procurement Plan, among others.

b. Participate either remotely or in-person in the Inception Workshop.

c. Review and provide inputs to the Inception 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 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	4,800 (1,200 per year)	Annually and at mid-point and closure.
GEF Project Implementation Report (PIR)	4,800 (1,200 per year)	Annually typically between June-August
Monitoring of environmental and social risks, and corresponding management plans as relevant (i.e. M&E Officer, including SES and Gender aspects)	4,800 (1,200 per year)	On-going.
Implementing the GRM and addressing environmental and social grievances	1,600	On-going
Supervision missions	None	Annually
Independent Mid-term Review (MTR)	66,000	01/03/2024
Independent Terminal Evaluation (TE)	66,000	01/01/2026

TOTAL indicative COST	**USD 153,000**	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The objective of the AMP in Djibouti is ?Supporting access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in low-carbon mini grids in Djibouti, with a focus on cost reduction levers and innovative business models.? More specifically, the project aims to increase the market competitiveness of solar PV-battery mini-grid systems, hence, support the expansion in energy access through the use of renewable resources. To address baseline challenges and achieve the overall objective, the project design involves a collaborative strategy revolving around three central ideas: (1) Creating an institutional set-up to enable private sector engagement in the mini-grid sector, including the establishment of a national focal point to oversee all matters related to mini-grid development and coordinating the effort of the different parties to ensure efficient intragovernmental collaboration and facilitated financial support to the mini-grid sector; (2) Developing quality standards to enable market auditing and ensure the developed systems are resilient and sustainable; and (3) Strengthening private sector actors through supporting their ability to self-organize, and their technical capacity to design and operate solar mini-grids, prepare tenders for project development, and seek finance for their projects.

The project has numerous socioeconomic benefits, at the national, local and individual household levels, as listed specifically below.

At the national level the project:

- Helps increase access to off-grid electricity, thus relieving the burden on the national grid, while allowing the government to meet the increasing demand sooner without large investments in infrastructure.

- Reducing the amount of fuel needed for power generation from diesel-powered mini-grids.

- Increased vocational training for renewable energy practitioners from the public sector as well as staff members and potential candidates for the EPCs and ESCOs who will engage in the work.

- Reduction of CO_2 emissions as a direct result of reduced reliance on fossil fuel for energy.

At the local level:

- Reduced fuel combustion in diesel generators will result in reduced air pollution and reduced particulate matter, resulting in better health for the local population.

- Reduced need for fuel transport to support mini-grids also means reduced congestion, fire and explosion hazards, and further reduced pollutants.

At the individual house-hold level:

- Improved stable access to clean energy is the starting point for households to become more comfortable and enables better adoption of modern technology for different purposes. This is becoming more crucial in light of the COVID-19 pandemic and the necessity for family members to work from home or attend online classes.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial			

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	QUESTION 3: What is the level of significance of the potential social and environmental risks? *Note: Respond to Questions 4 and 5below before proceeding to Question 5*	QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High

Risk Description *(broken down by event, cause, impact)[1]*	*Impact and Likelihood (1-5)*	*Significance (Low, Moderate, Substantial, High)*	*Comments (optional)*	*Description of assessment and management measures for risks rated as Moderate, Substantial or High*
RISK 1: Risk on lack of capacities. The scope of this risk belongs to Overarching Principle 1 and Programmatic Principle 2. Event: It may occur that the capacity of duty-bearers (e.g. government agencies, local skilled staff) for implementation of some project activities may be insufficient. Similarly occurs with the capacity of rights-holders (e.g. project-affected persons) to claim their rights. Cause: The project activities considered involve innovation and so that may be relatively new in the project's area of influence for both duty-bearers and right-holders. Also, the UNDP Universal Human Rights Index informs concerns in this country regarding the capacities of right-holder related groups and public officials/institutions. Impact: This may pose a potential harm to meeting the rights of right-holders.	I = 4 L = 2	Moderate	This risk is relevant to the project activities supporting all components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) This risk is not covered by the national legal requirements to conduct the project activities and/or when requirements are in place there are signs of been inconsistently enforced to the UNDP SES level.	As the project is Substantial risk, an ESMF has been prepared and annexed to the ProDoc. The ESMF covers all project risks. It contains procedures for the further screening, assessment and management measures that are required during the project?s implementation for compliance with the SES. A Stakeholder Engagement Plan has been prepared to manage this risk. See ESMF Attachment II (Risks A&M specifications) for details of assessment and management of this risk and all others.

RISK 2: Risk of project activities not being safeguards responsive during the project life cycle. . The scope of this risk belongs to Overarching Principle 1 and Programmatic Principle 2. Risk description: See tools implemented for the Programmatic Principles 3 and 5, Standards 3-7.	I = 3 L = 4	Moderate	Note that prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth, health status or other status including as an indigenous person or as a member of a minority. Unless safeguard measures are applied and enforced in terms of project interventions and future replicates when market escalates, the reality on the ground is that government policy decisions and investment promotion strategies take limited consideration of certain environmental and social aspects. A transversal aspect that could pose an unintended impact, particularly from the duty-bearers end. Therefore, this	See ESMF Attachment II for details of assessment and management of this risk.

RISK 3: Risk of exclusion of affected stakeholders due to their vulnerability and/or potential concerns about the project. The scope of this risk belongs to Programmatic Principle 5. Event: Stakeholders may be excluded at the participatory/beneficial activities of the project, and/or retaliation/reprisals may occur based on their grievances and objections . Cause: The UNDP Universal Human Rights Index informs concerns in this country regarding the situation of vulnerable groups/persons and some forms of freedom. And, there is no evidence that the national regulatory framework requires and/or implements clear practices at mini-grid projects for the inclusion of all potentially affected stakeholders, in particular disadvantaged groups, to fully participating in decisions that may affect them for the type of activities included in this project. Similarly, there is no evidence that grievances or objections from these same stakeholders are being managed and resolved as a usual practice through internationally recognized methods. Impact: This may pose a challenge to ensure that affected stakeholders will fully participate in decisions that will affect them, they will feel safe to express grievances or objections, these will be taken into account, and no retaliation or reprisals will take place against those stakeholders who express concerns or grievances or seek to participate or obtain information on the project.	I = 3 L = 4	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) This risk is not covered by the national legal requirements to conduct the project activities and/or when requirements are in place there are signs of been inconsistently enforced to the UNDP SES level.	A Stakeholder Engagement Plan has been prepared to manage this risk. A project-level GRM will be put in place. See ESMF Attachment II for details of assessment and management of this risk.

RISK 4: Risk on Women. The scope of this risk belongs to Programmatic Principle 3. Event: Women may be excluded at the participatory/beneficial activities of the project. Cause: The male oriented nature of energy and the limited social statues and opportunities identified for women. Impact: This may pose a challenge to ensure that women will have the chance to participate at the decisions-making level.	I = 4 L = 4	Substantial	Unless safeguard measures are applied and enforced in terms of project interventions and future replicates when market escalates, the reality on the ground is that decisions and investment promotion strategies take limited consideration on the involvement of women from the participatory and beneficial aspects. A transversal aspect that could pose an unintended impact, particularly from the duty-bearers end. Therefore, this risk is relevant to the project activities supporting all components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E)	Measures have been established through the Gender Analysis and Action Plan established at the PPG phase, to manage and reduce the risks identified on women. See ESMF Attachment II for details of assessment and management of this risk.

RISK 5: Risk of damage to biodiversity and natural resources due to land changes and new productive uses of the energy. The scope of this risk belongs to Project Standard 1. Event: It may occur that they are within critical habitats and/or environmentally sensitive areas, will require changes to the use of lands and resources, and therefore will affect the ecosystems in it. This may be particularly important for productive use of the energy generated depending on the type of sector and activity to support. Cause: All mini-grids involve the construction of new infrastructure. New built structures alien to the pre-existing conditions in the area are an alteration, in essence, of the biodiversity and natural resources in the project area of influence. Impact: At the construction stage, expected impacts related to the removal and displacement of the existing natural resources to allow the new structures to be built. At the operational stage, expected impacts related to, for example, maintaining natural resources not needed by the project to a minimal despite their natural reproduction/growth. Furthermore, mini-grids with a productive use entail unforeseen impacts should be expected according to the type of sector and activity to develop. And at the decommission stage, since the project will leave in place a built structure alien to pre-existing conditions in the area, the recovery of the original habitat and/or ecosystems and/or ecosystem services will be challenged.	I = 4 L = 3	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Djibouti higher risk because more complexity due to the potential involvement of hybrid mini-grids with existing fossil fuels (i.e. diesel) systems. Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to	The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II and XIV for details of assessment and management of this risk.

RISK 6: Adverse transboundary environmental concerns. The scope of this risk belongs to Project Standard 1. Event: It may occur that the equipment/materials for the project will affect the ecosystems at a transboundary level. Cause: All mini-grids involve the procurement and management of new equipment/chemicals outsourced internationally and are regarded as very challenging from the sustainability perspective. Impact: Expected environmental impacts related to the procurement of equipment/materials outside the project influence	I = 3 L = 2	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country.	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 7: Risk due to electrical shocks/effects on fauna, flora and people. The scope of this risk belongs to Project Standard 1 and 3. Event: Electrical shocks/effects may occur in fauna, flora and people. Cause: All mini-grids involve electrical equipment. Impact: At the operational stage, the electrical structure alien to pre-existing conditions in the area, may cause the damage/death/fire/etc? due to the interaction with fauna and flora.	I = 3 L = 3	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country.	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. - Djibouti higher risk because more complexity due to the involvement of hybrid mini-grids. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 8: Risk of local climate change events, and weather & hydro related disasters. The scope of this risk belongs to Project Standard 2. Event: It is realistic to consider that climate events (i.e. earthquakes, floods, landslides, severe winds?) may occur in the project?s area of influence and may affect to the built structures. Cause: The global increase of future climate change and subsequent disaster. And, all mini-grids are open air structures exposed to climate events and involve build structures that may be vulnerable to the impacts of climate change or disasters. Impact: They could increase climate related effects and the number of disasters in the project area.	I = 3 L = 3	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country.	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 9: Risk of overestimated emissions due to embedded activities. The scope of this risk belongs to Project Standard 2. Event: The procurement of equipment for the project will probably be outsourced internationally resulting in embedded emissions. Cause: All mini-grids involve solar panels and other activities that be imply indirect carbon emissions due to the project. Impact: They could decrease the calculated climate impact related to emissions avoided by the project.	I = 3 L = 3	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country.	See ESMF Attachment II for details of assessment and management of this risk. Though the risk is Low, it will be covered by the project?s assessments as needed for SES compliance.

RISK 10: Risk of overestimated emissions due to aggregation to a third-party project. The scope of this risk belongs to Project Standard 2. Event: The aggregation of the activities within the AMP to a third-party project may be accounted as reductions assigned to the AMP activities instead of the third-party project. Cause: Third party activities may be difficult to discern between projects. Impact: Assigning the achievements of the overall project (including third party activities) to which the AMP activities are aggregated would lead to an increase of carbon emission avoided to the atmosphere.	I = 3 L = 2	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country.	There are project activities potentially considering to act as an aggregation to third-party initiatives. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. See ESMF Attachment II for details of assessment and management of this risk.

RISK 11: Risk on the community due to hazardous materials (mainly batteries, e-waste, chemicals for land clearance). The scope of this risk belongs to Project Standard 3. ? Event: It may occur that activities and/or structures result hazardous to the community. Cause: The use of hazardous materials by the project. Impact: This may lead to non-desired effects to the community.	I = 4 L = 3	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Djibouti higher risk because more complexity due to the potential connection of mini-grids to national grid, the potential involvement of hybrid mini-grids with existing fossil fuels (i.e. diesel) systems, and the potential involvement of hybrid mini-grids aggregated to other existing renewable technologies (hydro, biomass?). Output specifics:	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 12: Ambient perturbance on the community due to intense works locally at construction and decommissioning, and new economic activities subsequent from productive use of the energy. The scope of this risk belongs to Project Standard 3. ? Event: It may occur that some new activities and/or structures may interact with the surrounding area and/or involve the alteration of the normal functioning of the community health, safety and/or security in the project?s area of influence, mainly as noise and physical hazards. Cause: The construction or/and decommissioning of the mini-grid and the energy generated by the project will raise new activities and/or new built structures. Impact: This may lead to the perturbance of the community?s health, safety and/or security. ?	I = 4 L = 3	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Djibouti higher risk because more complexity due to the potential connection of mini-grids to national grid, the potential involvement of hybrid mini-grids with existing fossil fuels (i.e. diesel) systems, and the potential involvement of hybrid mini-grids aggregated to other existing renewable technologies (hydro, biomass?). Output specifics:	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 13: Risk on community health, safety and/or security due to the influx of people, mainly project workers and other new comers subsequent to the new economic activities resulting from the productive use of the energy. The scope of this risk belongs to Project Standard 3. Event: It may occur that the new activities in the local area will attract new comers in the project?s area of influence. Cause: The project construction/decommissioning and the energy generated by the project will raise new activities and/or new built structures. Impact: This may lead to effects on community health, safety and/or security as this new influx of people, expected to be mainly men, may interact with the local residents and/or involve the alteration of the normal functioning of the community leading to new diseases and/or gender safety concerns.	I = 3 L = 3	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country. This risk is not covered by the national legal requirements to conduct the	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 14: Risk on damage of cultural heritage. The scope of this risk belongs to Project Standard 4. Event: It may occur that excavations and other environmental changes take place, and they may be within or adjacent to project?s areas of influence containing some form of cultural heritage (i.e. sacred places). Cause: built structures involve excavations and are alien to the pre-existing conditions in the area are an alteration. Impact: At the construction stage, this may lead to impacts related to the removal and displacement of the existing cultural heritage to allow the new structures to be built. Furthermore, mini-grids with a productive use entail unforeseen impacts should be expected according to the type of sector and activity to develop. And at the decommission stage, since the project will leave in place a built structure and/or new activities alien to pre-existing conditions in the area, the recovery of the original cultural heritage will be challenged.	I = 3 L = 3	Moderate	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country. This risk is not covered by the national legal requirements to conduct the	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 15: Risk of physical displacement and loss of livelihood due to eviction from land. The scope of this risk belongs to Project Standard 5. Event: All mini-grid systems involve the acquisition of land, and they may be within or adjacent areas containing existing energy/fuel providers, including those from the informal/traditional sectors. Cause: All mini-grids involve the construction of new infrastructure. New built structures occupy land, and access to the area may be restricted, and new energy service options for consumers arise. Also, the UNDP Universal Human Rights Index informs concerns in this country regarding forced evictions and/or land rights. Impact: At the construction stage, expected impacts related to the displacement of the existing legal or illegal inhabitants to allow the new structures to be built. And at the decommission stage, since the project will leave in place built structure and/or new activities alien to pre-existing conditions in the area, the return of the inhabitants and their livelihood will be challenged.	I = 4 L = 3	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country.	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 16: Risk of economic displacement due to loss of income from fuel selling. The scope of this risk belongs to Project Standard 5. Event: Traditional fuels supplied by local providers, including those from the informal/traditional sectors see their market diminished. Cause: Some mini-grid systems and project appliances to be implemented may replace an activity that was fueled with other energy sources like wood charcoal, paraffin, kerosene, diesel. For example in the households these activities may be cooking and lighting while in the community/commercial scope it may be diesel for the existing mini-grids. Impact: the change on the fuel used (i.e. from charcoal, private diesel mini-grids? to the service the renewable energy mini-grid provides) would lead to the loos of income for fuel suppliers, potentially these are mainly poor women selling in the informal market.	I = 4 L = 4	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country. This risk is not covered by the national legal requirements to conduct the	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 17: Risk of economic displacement towards the payment of energy services replacing the previous options. The scope of this risk belongs to Project Standard 5. Event: Electricity supplied by the project represents a higher cost to users that previously. Cause: Poor users have no economic means to face the increased costs of the energy provided by the project. Impact: this would lead to the increase of debt due to electricity buying.	I = 4 L = 4	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country. This risk is not covered by the national legal requirements to conduct the	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 18: Risk to indigenous peoples. The scope of this risk belongs to Project Standard 6. Event: Indigenous Peoples may be excluded at the participatory/beneficial activities of the project. Cause: The formal oriented nature of energy and the limited social statues and opportunities identified for Indigenous Peoples. Impact: This may pose a challenge to ensure that Indigenous Peoples will have the chance to participate at the decisions-making level.	I = 3 L = 3	Moderate	Due to the relative nature of the term ?indigenous? a generic concept is considered. This may include tribes, first peoples/nations, aboriginals, ethnic groups, occupational and geographical related groups like hunter-gatherers, nomads, peasants, hill people, etc., are also considered for all practical purposes as ?indigenous peoples?. This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics:	Country specifics: - At the PPG phase, teams have NOT confirmed the presence of indigenous groups at the national level. At the time of this document no information was yet available to study this risk at the site level therefore certain risk is yet possible. Given that up to now this Child Project has not counted with the involvement of an Indigenous Peoples Expert, to be conservative, it is realistic to assume that each site will require assessment and management to identify the potential indigenous peoples at the local level. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. As part of the ESIA/ESMP, an Indigenous Peoples Plan will be put in place and FPIC secured, if necessary for SES compliance. See ESMF Attachment II for details of assessment and management of this risk.

RISK 19: Risk on labour opportunity and working conditions. The scope of this risk belongs to Project Standard 7. Event: It may occur that working conditions are not meet the minimum criteria to satisfy the UNDP?s requirements. It may also occur that unskilled/manual labour loses their jobs. Cause: all project stages (i.e. construction, operation?) will require labour, some project activities will displace unskilled/manual labour, and the UNDP Universal Human Rights Index informs concerns in this country regarding labour rights, employment rates and/or working conditions for some of the stakeholder groups relevant to this project. Impact: This may lead to the use of child, forces, discriminatory, under-minimum practices and/or occupational health and safety accidents/incidents.	I = 4 L = 3	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Output specifics: - This risk applies to activities related to implementing pilots and their M&E but also to policy and regulatory activities due to the indirect potential impacts, for example, if they lead to expanded minigrid coverage after the project across the country. This risk is not covered by the national legal requirements to conduct the	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 20: Risk on pollution and resource efficiency. The scope of this risk belongs to Project Standard 8. Event: Pollution may occur and resource efficiency is not practiced to meet the minimum criteria to satisfy the UNDP?s requirements. Cause: All mini-grids will require resources and/or will lead with materials, waste and/or chemicals. And the UNDP Universal Human Rights Index informs concerns in this country regarding responsible consumption and production, clean water and sanitation, and life on land. Impact: This may lead to the significant consumption of raw materials, energy and/or waste, and the release of pollutants, generation of waste, hazardous/phase-outs materials, chemicals, pesticides.	I = 4 L = 4	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulation - Business Model Innovation with Private Sector - Scaled-up Financing - Digitalization, Knowledge Management (KM) and Monitoring and Evaluation (M&E) Djibouti higher risk because more complexity due to the potential connection of mini-grids to national grid, the potential involvement of hybrid mini-grids with existing fossil fuels (i.e. diesel) systems, and the potential involvement of hybrid mini-grids aggregated to existing other renewable technologies (hydro, biomass?). Output specifics:	Country specifics: - At the time of this document no information was yet available to study this risk at the site level. Therefore, to be conservative, it is realistic to assume that each site will require assessment and management. Potential gaps to be addressed will be identified through the gap analysis as indicated in the ESMF. The necessary management plan/measures will be put in place as part of ESMP(s), based on the ESIAs. See ESMF Attachment II for details of assessment and management of this risk.

RISK 21: Upstream risks due to policy or regulatory changes Event: It may occur that changes to the current policies and regulations will have an upstream effect. Cause: New policies and regulations alien to the pre-existing conditions are an alteration, in essence. Impact: Expected unforeseen impacts should be expected according to the type of sector and activity to develop.	I = 4 L = 4	Substantial	This risk is relevant to the project activities supporting the following components: - Policy and regulations - Knowledge Management and Monitoring and Evaluation	A SESA will be conducted on activities supporting policy and/or sector reforms to include the requirements and measures in order to minimise these unforeseen risks of future projects across the country during the scale-up of activities. See ESMF Attachment II for details of assessment and management of this risk.

QUESTION 4: What is the overall project risk categorization?		
Low Risk		
Moderate Risk		
Substantial Risk	**X**	Note: ? Requirements from Question 5 apply to this level of risk, for each Programmatic Principle and Project Standard triggered at this level of risk, a scoped study on key risks is required. ? Project aspects rated as Low Risk may be able to proceed while the assessments for other higher risk activities are being conducted.
High Risk		

QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)				
Question only required for Moderate, Substantial and High Risk projects				
Is assessment required? (check if ?yes?)	**X**			***Status? (completed, planned)***

	if yes, indicate overall type and status			Targeted assessment	Stakeholder Analysis - Completed, a Stakeholder Engagement Plan has been conducted at the PPG phase before PAC approval of the project. - Planned, a Stakeholder Engagement Plan for each sub-project (as needed for SES compliance) and will need to update the completed previous to the approval of the sub-project. - Gender Analysis: See ProDoc; completed during PPG. - Capacity assessment for duty-bearers - Ongoing, a Capacity Assessment for duty-bearers (top and bottom, i.e. government and security personnel) at the project has been initiated at the PPG phase before PAC approval of the project. See ProDoc. - Additionally, at the sub-project level, further capacity assessment for duty-bearers locally is planned and will need to the completed previous to the approval of each sub-project. Capacity assessment for right-holders - Ongoing, a Capacity Assessment for rights-holders (top and bottom, i.e. pan-African/national and local) at the project has been initiated at the PPG phase before PAC approval of the project. See ProDoc. - Additionally, at the sub-project level, further capacity assessment for right-holders locally is planned and will need to the completed previous to the approval of each sub-project. Indigenous Peoples, initial analysis: Completed, an Indigenous Peoples Analysis has been completed at the PPG phase before PAC approval of the project. Other targeted assessments might be required (separate from the ESIA requirements noted below), and will be determined during implementation of the ESMF. That could include (inter alia): - A Cultural Heritage Analysis - A climate risk assessment, - A disaster risk assessment, - A hazard assessment,

		X	ESIA (Environmental and Social Impact Assessment)	Planned, as noted in the ESMF.
		X	SESA (Strategic Environmental and Social Assessment)	Planned.
Are management plans required? (check if ?yes)	**X**			
If yes, indicate overall type		**X**	Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)	Capacity Management Plan: Planned, for each sub-project and will need to the completed previous to the approval of the sub-project. Stakeholder Engagement Plan - Completed, a Stakeholder Engagement Plan has been conducted at the PPG phase before PAC approval of the project. - Planned, a Stakeholder Engagement Plan for each sub-project and will need to the completed previous to the approval of the sub-project. Gender Action Plan: See ProDoc; completed during PPG Other targeted management plans might be required (separate from the ESMP requirements noted below), and will be determined during implementation of the ESMF. That could include (inter alia): ? Emergency Response Plan ? Waste Management Plan ? Labor Management Procedures (LMP) ? Biodiversity Action Plan -

		X	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	Planned, as noted in the ESMF.
		X	ESMF (Environmental and Social Management Framework)	Completed during PPG (covering this AMP child project and others). Exceptionally, only if the project design (i.e. components, activities) change along the project cycle, this ESMF will need to be re-visited. See exclusion criteria in the ProDoc, Annex 10.
Based on identified risks, which Principles/Project - level Standards triggered?		**Comments (not required)**		
Overarching Principle 1: Leave No One Behind	n/a			
Programming Principle 2: Human Rights	**X**			
Programming Principle 3: Gender Equality and Women?s Empowerment	**X**			
Programming Principle 5: Accountability	**X**			
1. Project- level Standard 1. - Biodiversity Conservation and Sustainable Natural Resource Management	**X**			

Project- level Standard 2. Climate Change and Disaster Risks	**X**	
Project- level Standard 3. Community Health, Safety and Security	**X**	-
Project- level Standard 4. Cultural Heritage	**X**	
Project- level Standard 5. Displacement and Resettlement	**X**	
Project- level Standard 6. Indigenous Peoples	**X**	
Project- level Standard 7. Labour and Working Conditions	**X**	
Project- level Standard 8. Pollution Prevention and Resource Efficiency	**X**	

[1] See ?SESP Summary? for detailed breakdown by event, cause, impact.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
DJIBOUTI SESP Oct 4 2021 _CLEAN_ (1)	**CEO Endorsement ESS**	

Title	Module	Submitted
ANNEX 10 - ESMF for 10 UNDP AMP Child Projects_06Oct2021_clean (1)	CEO Endorsement ESS	
PIMS 6432 ANNEX_10-ESMF - 19 May 2021-EGA jbf FK CLEAN_JM_EGA (1)	CEO Endorsement ESS	
PMIS 6327 ANNEX_06-SESP-2021_JM_EGA jbf CLEAN_JM	CEO Endorsement ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

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): *UNDAF Outcomes 6 ? Good governance:* National and local institutions and actors ensure the effective, efficient and transparent management of public resources for inclusive and equitable development. *UNDAF Outcome 7 ? Community resilience:* Livelihoods of poor rural and peri-urban communities are improved to enhance their resilience to climate risks, shocks and food insecurity. *UNDAF Outcome 8 ? Equitable development of the regions:* The living conditions of the poorest populations are improved for better management and protection of natural resources and ecosystems strengthening resilience and promoting equitable regional development *SNCC ? National Strategy for Climate Change:* Issued in 2018 to focus on climate change in Djibouti.				
	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	*Indicator 1*: *GEF Core indicator 6* Greenhouse gas emissions mitigated (metric tons of carbon dioxide equivalent; tCO_2e)	Zero, since the project has not yet started	Zero, since the pilot project is not yet commissioned	Direct: 39,717 tCO_2e Indirect: 36,000 tCO_2e (90% of the total estimation for this project)
	Indicator 2: 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 is not yet commissioned.	0.84 MW (Solar PV capacity) 2.042 MWh (Battery storage)

investment, in low?carbon mini?grids in Djibouti, with a focus on cost?reduction levers and innovative business models.	*Indicator 3: GEF Core indicator 11* Number of direct beneficiaries disaggregated by gender (and customer segment) as co-benefit of GEF investment Units of measure: number of people; number of connections disaggregated by customer segment	Zero, since the project has not yet started	Zero, since the pilot project(s) is not yet commissioned	8,999 people (Female) 10,147 people (Male) 19,146 people (Total) 18,500 people (residential) 448 people (social) 198 people (commercial/PUE) 3,700 connections (residential) 112 connections (social) 66 connections (commercial/PUE) 3,878 connections (total
	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	5 people (Female) 5 people (Male) 10 people (Total)	10 people (Female) 10 people (Male) 20 people (Total)
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	*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.)	No explicit delivery identified. Default model is government ownership. Lack of multi-stakeholder dialogue	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.

investment in low-carbon mini-grids.	*Indicator 6:* Number of policy derisking instruments[1] 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	At least one policy derisking instrument.	At least two policy derisking instruments.
	Indicator 7: A focal point is established to oversee the operationalization of the proposed institutional setup for rural electrification, the establishment of university and vocational training programmes for mini?grid design and O&M, and the adoption of domesticated quality standards for low?carbon mini-grid system components (*binary; 1/0)*	No focal point exists to oversee all aspects of mini?grid sector development	A draft for the proposed institutional setup for rural electrification is presented to stakeholders, and consensus is achieved among stakeholders on the entity to host the focal point for mini?grid sector development.	The focal point is operational, with finalized institutional setup for rural electrification, domesticated quality standards for system components, and agreements with universities and vocational training institutes on mini-grid education programmes.
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. Institutional set-up for rural electrification assessed to support the establishment of a focal point for mini-grid development, and institutional capacity building provided on technical, managerial, and regulatory issues. 1.4. Public programmes (apprenticeships, certificates, university programs) to develop competitive, skilled labor market in the design, operation and maintenance of solar and hybrid mini-grids. 1.5. Domestication of quality standards for solar mini-grid components, and institutional capacity of national authorities in-charge, i.e. standards organizations/bureau, strengthened.			
Project component 2	**Business Model Innovation with Private Sector**			

Outcome 2 Innovative business models based on cost reduction operationalized, with strengthened private sector participation in low-carbon mini?grid development.	*Indicator 8:* Mini-grid pilots implemented (e.g. facilities and systems installed and commissioned) to demonstrate a delivery model, cost-reduction measure(s) and/or productive use of electricity (*binary; 1/0)*	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. (1) Any project tendering process, as applicable, for minigrid pilots is launched. (1)	100% of the planned minigrid pilots, as identified in the project?s Minigrid Pilot Plan, are commissioned. (1) 100% of social users and PUE facilities associated to the mini-grid pilots are installed and commissioned, and using electricity from the mini-grid pilots. (1)

	Indicator 9: Capacity of private sector mini?grid developers and/or operators is enhanced to participate in sector-wide tendering processes to develop and/or operate mini-grids under EPC and ESCO contracts (*binary; 1/0)*	Private sector companies are involved in mini?grid development as EPCs, but no companies are engaged in ESCO contracts	Templates for tender documents developed, and at least 10 private sector companies receive training on preparing tenders for EPC and ESCO tenders to develop, operate and maintain low-carbon mini?grid systems. (1) Planned capacity building activities for year 1 and 2 are implemented. (1) 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. (1)	A national industry association is capacitated to deliver trainings to private sector EPCs and ESCOs, and have continuous open communication with public parties on issues related to rural electrification and mini-grid sector development. (1) Planned capacity building activities for year 3 and 4 are implemented. (1) 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. (1)
Outputs to achieve Outcome 2	2.1. Pilots for low-carbon mini-grids are developed, to demonstrate business models for off-grid electricity including productive use/innovative appliances, leading to cost-reduction in mini-grids. 2.2. Capacity of potential tender bidders (private sector developers) strengthened to consider innovative business models and cost-reduction levers. 2.3. Support provided to establish and grow a national industry association of private sector mini-grid developers.			

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 10:* 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 (*binary; 1/0)*	Domestic financial institutions are not involved in mini-grid funding	Planned capacity building activities for year 1 and 2 are implemented. (1) 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. (1)	) Planned capacity building activities for year 3 and 4 are implemented. (1) 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. (1)
	Indicator 11: Number of government or impact investor-supported financing mechanisms offering concessional finance for low-carbon mini-grids	Zero, since the project has not yet started	At least one complementary funding instrument is designed and operational. (1)	At least one low-carbon mini-grid project has managed to obtain concessional finance (i.e. sign the relevant agreements) through the designed complementary funding instrument.
Outputs to achieve Outcome 3	3.1. Design support, including development of operational guidance, provided for Mini-grid Funding Facility (MFF) or equivalent financial mechanism, under rural electrification agencies/funds, such as the National Development Fund (NDF) or the Guarantee Fund (GF). 3.2. Domestic financial sector capacity building on business and financing models for mini-grids. 3.3. Capacity building provided to local mini?grid developers and investors on measuring and reporting on impact indicators, building credibility in impact investment as an asset class.			

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 12:* A project digital strategy is prepared and implemented by the PMU to contribute to project implementation and local mini-grid market development (*binary; 1/0)*	No progress, since the project has not yet started	The Project Digital strategy is developed (in consultation with public and private parties, and in close collaboration with the PMU of the AMP Regional Project and the CoPs led by the AMP Regional Project) and being implemented. (1)	The Project Digital Strategy is implemented. (1) Public officials, including women, are capacitated to utilize the associated digital tools and data reporting protocols. (1) Recommendations for rolling out digital solutions for minigrids at national level have been shared with key national stakeholders. (1)
	Indicator 13: Mini-grid pilots are sharing data on mini-grid performance with the regional project and other stakeholders following best practices and guidance provided by the AMP Regional Project (*binary; 1/0)*	Zero, since the project has not yet started	The project?s ?digital & data management platform? is procured and operational, ready for data collection from the project?s mini-grid pilot(s), and for data sharing with the AMP regional project?s digital platform. (1)	100% of the planned minigrid pilots, as identified in the project?s Minigrid Pilot Plan, are collecting and sharing data with the AMP Regional Project (at least on a quarterly basis) using the project?s ?digital & data management platform?. (1)
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 pilots, 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 pilots 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.			

[1] 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.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Compilation of Comments submitted by Council Members of the GEF December 2019, Work Program. Regional project, GEF 7 Africa Mini-grids Program, UNDP (GEF Program Financing: $24,235,308) (GEF ID: 1043).

Table 1: Council Comments and Responses

Comment & Response	Reference
Council Comments (Germany):	

Comment & Response	Reference
1. Comment: *"Germany requests that the risk and co-financing sections of the document are revised to provide more information about how the project implementers intend to mobilize the proposed finance and what alternatives will be pursued in the event of delays or changes to the indicative funds. With around 344 Mio. USD, provided by 51 financiers, a well-managed and guaranteed flow of co-financing will be crucial to the project?s success. However, at this stage, co-financing sources and amounts are still indicative, thereby giving no assurance that finances will be made available."* **Response**: Indeed, co-financing and partnerships with the private sector and capital providers will be critical to the program?s success. During the PPG phase, discussions with co-financiers have been deepened and formalized. Details on this have been captured on this in both the CEO endorsement requests and project document. Measures to ensure that co-financing materializes will be addressed as follows, at the regional project and national project level: Regional project measures: (i) The AMP regional project will, as part of its monitoring activities under Component 5, track overall co-financing for the program, including co-financing for the regional project as well as for national projects. As per the regional project?s Stakeholder Action Plan (Annex 8), the regional project will be in a position to identify new sources of co-financing as a mitigation action for any of the sources confirmed at CEO Endorsement stage that do not materialize during implementation. (ii) UNDP is part of the Minigrid Funders Group (MGF), which represents the main donors and development agencies active in minigrids, which will provide a mechanism to coordinate with other key funders in the minigrids sector. (iii) UNDP?s oversight team for the regional project, and the regional project?s PMU, will monitor the realization of co-financing on an annual basis in the GEF PIR, and in the mid-term and terminal evaluation. (iv) The regional project?s Board is tasked in its TOR with tracking and monitoring co-financing. Djibouti national project measures. (i) UNDP?s Country Office, and the national project?s PMU, will monitor the realization of co-financing on an annual basis in the GEF PIR, and in the mid-term and terminal evaluation. (ii) The national project?s Board is tasked in its TOR with tracking and monitoring co-financing. (iii) During the PPG phase, stakeholder consultations have been conducted including with private sector players to ensure their engagement from the very beginning. Various players have expressed their will and potential concrete measures to support the success of the AMP project. (iv) The UNDP?s Country Office will also stimulate confirmed co-financiers to materialize their commitments and identify other co-financing opportunities related to new projects and other players	Djibouti CEO endorsement request: Part II, Djibouti national project document: Part IV. Regional project document: Section IV. RESULTS AND PARTNERSHIPS: - Description of Component 5); - Key Risks (Table 9) Djibouti CEO endorsement request: Part II and Part II. Djibouti national project document: Annex 7 UNDP Risk Register Part IV. Results & Partnerships

Comment & Response	Reference
2. Comment: *"Germany requests **clear identification of relevant stakeholders for all countries and all program components**, including regional and national agencies, technical stakeholders (implementation phase), strategic partners and relevant companies for e.g. capacity building. The program includes 11 African countries and numerous stakeholders. For some countries, relevant ministries and relevant technical implementation partners have been appointed, for others not."* **Response**: All relevant stakeholders have been identified for Djibouti and included in the project document?s comprehensive Stakeholder Engagement Plan. [Stakeholders identified as partners and potential partners are also highlighted in project document, [Section IV]] The Executing Agency/implementing partner for Djibouti has been identified as the Ministry of Urban Planning, Environment and Tourism (MUET), newly renamed Ministry of Environment.	Djibouti CEO endorsement/ approval request document: - Part II, Section 6 - Institutional Arrangement and Coordination Djibouti Project document: Part IV. Results & Partnerships

Comment & Response	Reference
3. Comment: *"Germany requests a **breakdown of component 2 activities**, including more details on the project approach under Component 2. A large part of the program?s allocated funding is for investments in this component (49% of total budget). However, the activities in this component are not sufficiently described. Given the importance to the project outcomes, Germany would also **recommend further describing how project activities contribute to the project?s overall theory of change.**"* **Response**: Djibouti National project: Component 2 activities, which include GEF INV for minigrid pilots, for the AMP in Djibouti are comprehensively described in the project document, Section IV, RESULTS AND PARTNERSHIPS. The contribution of the respective components to the national project?s theory of change has been detailed in the project document Section III, strategy, immediately following the TOC diagram. Regional project. At the program level, the contribution of minigrid investment pilots to the program?s overall TOC has been further explained in the Strategy Section of the AMP Regional project document as follows: *?Minigrid investment pilots contribution to the Program?s TOC: National Projects include funds, under Component 2 (Business model innovation and private sector), for supporting minigrid investment pilots seeking to demonstrate innovative business models and cost-reduction opportunities. Minigrid pilots have a key role within AMP by contributing to demonstrate cost-reduction which can be leveraged to improve the financial viability of renewable energy minigrids. Minigrid pilots are aligned with one or more of the three key areas of opportunity mentioned above by demonstrating: (i) a particular delivery model or elements of a delivery model around which the government wishes to build capacity and engage with minigrid developers; (ii) productive uses of electricity and their potential to reduce costs and enable minigrid development at scale; and/or (iii) opportunities around digitalization and the use of data for minigrid cost reduction. Feedback loops to other national project activities (e.g., national dialogues, capacity building) and with the AMP Regional Project (e.g. Community of Practice) are intended to actively disseminate the learnings from the pilots to inform both the policy and regulatory environment as well technical capacity building.?*	Djibouti CEO endorsement/ approval request document, Part II Djibouti National project document: Section IV. Results and Partnerships, Djibouti national project document, Section III. Strategy. Regional Project Document: Section III. STRATEGY

Comment & Response	Reference
4. Comment: *"Experiences with implementing mini-grids in Africa have proven that high financial costs are linked to high financial risks in local markets. The proposal considers the risk, but* ***Germany recommends that special attention should be given to financial risk reduction and risk-hedging approaches****. The risk section should be revised accordingly.* ***The lack of skilled technical staff is a further risk that requires greater consideration****. Germany recommends a greater focus on capacity building for skilled technicians."* **Response**: Effectively and efficiently addressing investment risks will be key to transforming local minigrid markets. AMP?s design - both at national and regional project levels - will use UNDP?s innovative Derisking Renewable Energy Investment (DREI) framework to identify, quantify and then target the underlying risks that are driving high financing, investment and operation costs. The DREI framework facilitates selection from a menu of possible policy and financial derisking instruments which can then reduce, transfer of compensate for these risks. Following the performance of a DREI techno-economic analyses in Djibouti in year 1, in Output 1.2. findings can then shape follow-on project and partner activities. Lessons learnt at national level in each country will be aggregated into regional knowledge products by the AMP Regional Project and disseminated widely. In the risk section, issues and mitigation measures related to financing risks are detailed.	Djibouti CEO endorsement/ approval request document: Part II. Djibouti national project document: - Section II ? Development Challenge - Section IV. Results and Partnerships. - Annex 7 UNDP Risk Register
Council Comments (Norway/Denmark):	
5. Comment: *"USD 1,303,576 is budgeted for Program Management Cost (i.e. ca. 5%) presumably for implementing the various components"* **Response**: Comment targeted at program level and addressed in the regional project response. Details of Djibouti AMP co-financing, fees and Project Management Costs are included in the documents.	
6. Comment: *"USD 2,181,178 in addition is requested from the UNDP, i.e. ca. 8.3% - is this on top of the fee above? "* **Response**: Comment targeted at program level and addressed in the regional project response. Details of Djibouti AMP co-financing, fees and Project Management Costs are included in the documents.	

Comment & Response	Reference
7. Comment: *"Estimated co-financing is USD 344,310,000 ? of this only about USD 95 mill is loans (from WB, GCF, AfDB and GIZ), or ca. 28%. This is to be expected as there are still not strong business models for mini-grids without significant grant financing. "* **Response**: Agreed. Minigrids still require grant financing and concessional lending which is why the co-financing sources identified for AMP include a mix of grants and loans with loans representing a smaller fraction of the total co-financing.	
8. Comment: *"Output 2.1 stipulates that ?Pilots developed, including on productive use/innovative appliances and modular hardware/system design, leading to cost-reduction in mini-grids? ? **are there not a lot of lessons that can be gained from existing mini-grid programs now**? "* **Response**: While the program builds on lessons learned from previous projects and programs, minigrid markets in many countries overall remain immature, and there is a strong need for continued piloting of minigrids. The emphasis for minigrid pilots (Output 2.1) will be on piloting and showing proof-of-concept business models. To provide a better recount of lessons learned the program builds off from, a section on lessons learned has been added to regional project document, section III Strategy.	Regional Project Document: Section III. STRATEGY
9. Comment: *"Output 3.3 ?General market intelligence study on minigrids prepared and disseminated amongst public officials and finance community? ? **how will this be different from existing market intelligence,** for example:* *o https://www.esmap.org/mini_grids_for_half_a_billion_people* *o https://eepafrica.org/wpcontent/uploads/EEP_MiniGrids_Study_DigitalVersion.pdf* *o https://www.reeep.org/mini-grid-development-africa* *There is also at least one existing ?community of practice?:* *o http://ledsgp.org/community/africa-mini-grids-community-ofpractice/?loclang=en_gb* *Similarly, **how will the knowledge tools (4.1) be different from/build on others**?"* **Response**: National Market Intelligence Studies. [This comment is not applicable to Djibouti, as it does not have this output. Regional project: Knowledge tools Comment targeted at program level and addressed in the regional project response.	

Comment & Response	Reference
10. Comment: *"**How will the implementers ensure that markets are not undermined?** There are currently several minigrids invested in by commercial actors (e.g., Norfund in Madagascar - https://www.norfund.no/newsarchive/lighting-up-madagascar) and the program should provide assurances that it will not undermine markets through **(overly) subsidized** new minigrids (e.g., if a few villages are connected to a minigrid which has been commercially invested in and pay a relatively high tariff, **it can lead to discontent** if another few nearby villages are connected to a new mini-grid that due to a higher level of grant financing pay a lower tariff)."* **Response**: Risk of overly subsidization of new minigrids. In order to risk any over subsidization, the level of subsidy that will be applied to GEF ?Investment? (INV) funds will be based on a minimum concessionality principle. This principle can be achieved methodologically in different ways, for example by ensuring LCOE parity with a reference tariff; or based on willingness/ability to pay (which may be determined by a study during implementation). Such methodological assessments will be part of an overall package of financial due diligence/assessments that will be performed during the tender process to select recipients of pilot support. Each project?s CEO endorsement/approval request document (and UNDP Project Document) elaborates on this principle and establishes the need for each national project to 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 minigrid pilot(s). Among other key aspects, the project?s Minigrid Plan Pilot Plan will determine the project?s approach to ensure minimal concessionality for the level of GEF INV support to the pilot(s). The project?s Minigrid Pilot Plan will first be reviewed for clearance by UNDP (CO and BPPS NCE), and then shared with the Project Board. Potential social discontent on tariffs. Even when avoiding the risk of over subsidization of minigrid pilots by applying the minimum concessionality principle, there is a possibility that new minigrids have lower tariffs than existing minigrids which were developed with a lower grant element and/or in general incurred in relatively higher costs. As minigrids scale, and costs decline over time, electricity tariffs (particularly cost-reflective electricity tariffs) are expected to decline as well. Mitigation for this risk comes from the systematic national dialogue that national projects will promote and support under Component 1, concretely under Output 1.1. ?An inclusive national dialogue to identify minigrid delivery models is facilitated, clarifying priority interventions for an integrated approach to off-grid electrification?. Results from activities implemented in parallel under the other outputs will loop their respective (pre-)results back into the national dialogue discussions. This will include, but not be limited to, activities which can shed light on trends and progress regarding minigrid cost reduction, and the interplay between subsidies and electricity tariffs.	Djibouti CEO endorsement/ approval request document: - Part II Djibouti national project document: Section IV. Results and Partnerships. Djibouti CEO endorsement/ approval request document: - Part II. Djibouti national project document: Section IV.

Comment & Response	Reference
Council Comments (Canada):	
<u>11. Comment</u>: *"Mini-grids can have important impacts on development, including on energy access, agriculture, health and education.* ***It would be interesting if the project could explore opportunities to make further linkages with rural development programs****."* **<u>Response</u>**: Indeed, energizing productive uses of energy in rural communities unlocks agricultural value and rural economic development that initiates a virtuous cycle of growth: increased and more predictable demand for electricity that improves the viability of minigrid operations, lowers the costs of supply and in turn improves affordability and gives more people access. In Djibouti, the electricity access rate in rural areas is very low, less than 5%. The work of the AMP project on regulations and enabling environment will help reduce the high tariffs. -	Djibouti CEO endorsement/ approval request document: - Part II. Djibouti national project document: Section IV
<u>12. Comment</u>: *"The minigrids program has value for engagement where there are market failures,* ***and there should be entry points for the private sector****.* *The project is also well-aligned with Ethiopia?s Growth and Transformation Plan and its objective of ?Building Climate Resilient Green Industry? and ?Expanding Energy Infrastructure and Ensuring its Quality?.* **<u>Response</u>**: We agree with this statement. AMP seeks to scale commercial and private investment in minigrids. Market failures will be identified and addressed. The design and activities of AMP Djibouti seeks to create multiple entry points for the private sector. This includes several outputs of the project.	Djibouti CEO endorsement/ approval request document: - Part II. Djibouti national project document: Section IV.
Council Comments (United States):	

Comment & Response	Reference
13. Comment: *"The proposal addresses social acceptance risk but offers the use of policy and financial de-risking measures as a way to reduce cost, thereby increasing social acceptance risk. It does not address the value of messaging or public promotions and education campaigns to lower that risk further. Also, the program mentions working groups, but does not elaborate on make-up of the groups or state a commitment that the working groups will include representatives from local and community consumer and user stakeholders. Reviewers suggest a mechanism to ensure these groups include consumer stakeholders, indigenous representatives, and local authorities to educate and seek input on unexpected effects or consequences of the project at the local level."* **Response**: AMP Djibouti has considered risks arising from lack of awareness and resistance to renewable energy and minigrids in communities, among other risks driving high costs for minigrid development. Social acceptance issues are usually due to due to unfamiliarity with electricity and renewable energy sources; misinformation/perceptions and lack of awareness for mini-grid offerings; resistance from incumbent businesses (e.g., diesel-based generation) and users (e.g., SHS), which can get disrupted by minigrids. AMP Djibouti seeks to address this risk by engaging and consulting with a diverse array of stakeholders, including representatives from local and community consumer and user stakeholders as per the Stakeholder Engagement Plan. In addition, salient among opportunities to engage and consult with representatives from local and community consumer and user stakeholders, is the national dialogue on delivery models Output 1.1.	Djibouti CEO endorsement/ approval request document: Part II. Djibouti national project document: - Section IV.

Comment & Response	Reference
14. Comment: *"Finally, the program will promote a value chain approach to technology transfers that will integrate local labor and local industries / service providers in the development of solar PV-battery minigrids. Reviewers note that monitoring the value chain periodically to ensure sufficient local integration (or make the necessary adjustments) will be important to the success of the project. GEF may want to consult with experts at the U.S. Department of Energy?s Office of Electricity, which works with U.S. state and local electricity officials and industry groups, to share data and best practices"* **Response**: Local labor and industries, together with local private sector developers and service providers, will be a key element in the long-term viability and sustainability of the minigrid market in Djibouti. At the regional project level, component 1 ?Knowledge Tools? will curate and disseminate materials and reports detailing examples of good practice in this area. The work developed by the U.S. Department of Energy?s Office of Electricity, with U.S. state and local electricity officials and industry groups, is one of the resources that will be leveraged for this purpose. In addition, supply chain actors and the private sector are stakeholders that will participate as members of the AMP community of practice and benefit from South-South cooperation, knowledge sharing, identifying common challenges, and reviewing outputs of the AMP.	Djibouti CEO endorsement/ approval request document: - Part II Djibouti national project document: - Section IV

Table 2: STAP Comments and Responses

Comment & Response	Reference

Comment & Response	Reference
1. Comment: *Mini-grids have much potential to bypass old development pathways for electrification. However, there is also growing literature on their pitfalls, which should be addressed. As with other GEF project proposals, more effort is needed to engage with the peer-reviewed literature on the topics. Examples of literature in this genre include:* *Mini-Grids for the Base of the Pyramid Market: A Critical Review (https://www.mdpi.com/1996-1073/11/4/813);* *Mini-grid based off-grid electrification to enhance electricity access in developing countries: What policies may be required? (https://www.sciencedirect.com/science/article/pii/S0301421516301781);* *Rethinking the sustainability and institutional governance of electricity access and mini-grids: Electricity as a common pool resource (https://www.sciencedirect.com/science/article/pii/S2214629617303638);* *Institutional Innovation in the Management of Pro-Poor Energy Access in East Africa (https://www.sussex.ac.uk/webteam/gateway/file.php?name=2015-29-swps-gollwitzer-etal.pdf&site=25).* **Response**: The program design has been informed by extensive literature review and consultations with technical experts and development partners. This has informed (1) the overall design of the program, as well as (2) the program?s three main key areas of opportunity: **(i) National dialogues on minigrid delivery models; (ii) Productive use of electricity; and (iii) Data & Digitalization,** and in turn been translated to national projects. This literature exercise review is documented in the AMP regional project document, given its overall knowledge management function for the program. 1. Overall Program Design ? Key Literature GIZ, GET.transform (2020). A Renewable Energy Minigrid Technical Assistance Guide. Take-aways from 15 years of GIZ support in minigrid market development. April 2020 (link) AMDA (2020). Benchmarking Africa?s minigrids. SEforAll, BNEF and MGP (2020). State of the Global mini-grids Market Report 2020. Trends of renewable energy hybrid mini-grids in Sub-Saharan Africa, Asia and Island Nations. (link) IRENA (2016). Innovation Outlook: Renewable Mini-grids. (link) ESMAP (2019). Mini Grids for half a billion people. Market Outlook and Handbook for Decision Makers. Technical Report 014/19. (link) - The World Bank, AFD (2019). Electricity Access for Sub-Saharan Africa. (link) - RMI (2018). Minigrids in the Money: Six Ways to Reduce Minigrid Costs by 60% for Rural Electrification (link) - GET.transform (2021). Nigeria Case Study: Financing Instruments for the Mini-Grid Market, (link) 2. Program?s three key areas of opportunity (i) **National dialogues on minigrid delivery models** The AMP has embraced the key understanding that the development of a minigrid delivery model as the basis of a sustainable minigrid sector should ideally be implemented through a national dialogue involving all affected and required stakeholders. Specific resources which have informed program design with respect to this key area of opportunity include (but are not limited to):	Regional Project Document: Section IV, Box 2.

Comment & Response	Reference
2. Comment: Furthermore, there is considerable literature on the opportunities presented by blockchain technology for energy projects like this, including for renewable energy generation, distribution and management. STAP recommends that the project proponents explore the possibilities of using this technology to enhance the global environmental benefits of the project. Examples of relevant literature on this include: STAP?s blockchain paper (http://stapgef.org/harnessing-blockchain-technology-delivery-global-environmentalbenefits); Blockchain technology in the energy sector (https://www.sciencedirect.com/science/article/pii/S1364032118307184); Blockchain meets Energy (https://fsr.eui.eu/wp-content/uploads/Blockchain_meets_Energy_-_ENG.pdf); Blockchain: A true disruptor for the energy industry (https://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us-blockchaindisruptor-for-energy-industry.pdf). **Response**: As part to the PFD addendum approved in June 2021, a new component has been added to the regional project focused on mainstreaming the use of digital tools and solutions across national child projects and other national stakeholders. This is premised upon the notion that digitalization offers great potential for minigrid cost reduction. While no specific emphasis has been placed within AMP on developing Blockchain applications, the Regional Project will knowledge-build on and identify opportunities to add value via the use of digital tools and solutions for planning, operations, financing, and other key applications.	
3. Comment: A generic diagram of the theory of change for minigrids is presented which starts with a diagnosis of risks and then proposes how to address them. However, this is linear and has only one step. There needs to be consideration of how particular kinds of policies could lead to change rather than just stating that policies will address the diagnostics. This diagram needs to be refined with more steps that unpack points like ?innovative financing? and ?business model and innovation? and ?policies and regulations.? Please see STAP paper on theory of change for further guidance: http://stapgef.org/theory-change-primer **Response**: The theory of change diagram for the program has been now further developed and refined to unpack key policies/activities under each of the four main components, which indeed feedback to address the originally identified risks. A new outcome column has also been inserted. This new theory of change is now reflected in the national project documents, as well as regional project documents.	Djibouti CEO endorsement/ approval request document: - Part II. Djibouti national project document: - Section III.

Comment & Response	Reference
3. Is the objective clearly defined, and consistently related to the problem diagnosis? **Comment**: Yes. **Response:** NA	
4. A brief description of the planned activities. Do these support the project?s objectives? **Comment**: Nicely described with clear objectives. **Response:** NA	
5. A description of the expected short-term and medium-term effects of an intervention. **Comment**: These are adequately provided. **Response:** NA	
6. A description of the products and services which are expected to result from the project.Is the sum of the outputs likely to contribute to the outcomes? **Comment**: Adequately provided. **Response:** NA	
7. Is the baseline identified clearly? **Comment**: Baselines are linked to earlier Child projects. **Response:** NA	

Comment & Response	Reference
8. What is the theory of change? **Comment**: There is a growing literature on the barriers to minigrid adoption. As with other GEF project proposals, more effort is needed to engage with the peer-reviewed literature on the topic. An example of an article in this genre which is open source is linked here: https://www.mdpi.com/1996-1073/11/4/813 **Response**: It is indeed critical to have a good understanding of minigrid barriers. AMP?s overall approach to minigrid barriers has been informed by (1) UNDP?s own Derisking Renewable Energy Investment (DREI) Framework for off-grid electrification (link), a leading publication in the field which identifies a taxonomy 9 investment risk and 25 investment barriers for minigrids, itself based on extensive consultations and literature review. (2) An independent review of recent literature on the subject, including the documents listed below: GIZ, GET.transform (2020). A Renewable Energy Minigrid Technical Assistance Guide. Take-aways from 15 years of GIZ support in minigrid market development. April 2020 (link) AMDA (2020). Benchmarking Africa?s minigrids. SEforAll, BNEF and MGP (2020). State of the Global mini-grids Market Report 2020. Trends of renewable energy hybrid mini-grids in Sub-Saharan Africa, Asia and Island Nations. (link) IRENA (2016). Innovation Outlook: Renewable Mini-grids. (link) ESMAP (2019). Mini Grids for half a billion people. Market Outlook and Handbook for Decision Makers. Technical Report 014/19. (link) - The World Bank, AFD (2019). Electricity Access for Sub-Saharan Africa. (link) - RMI (2018). Minigrids in the Money: Six Ways to Reduce Minigrid Costs by 60% for Rural Electrification (link) - GET.transform (2021). Nigeria Case Study: Financing Instruments for the Mini-Grid Market, (link) Please also see the earlier response to STAP Comment #1.	Regional Project Document: Section IV, Box 2.
9. GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits? **Comment**: Cost reasoning is well defined. Monitoring and evaluation is noted adequately through the Child projects phase. The prior usefulness of these monitoring mechanisms should be reviewed. **Response:** Monitoring: At a national project level monitoring and evaluation has been expanded into a Quality Assurance and Management Framework (QAMF) that will aggregate data across the program linked and will link to specific outputs (e.g. publications and insight briefs) and intelligence to ensure the usefulness of collected data. -	Djibouti national project document: Section IV.

Comment & Response	Reference
10. Are the benefits truly global environmental benefits, and are they measurable? **Comment**: The proposal identifies carbon mitigation benefits with adequate referencing of methods. Tradeoffs are not discussed but should be, in terms of reliability failures that can happen with minigrids. What are the backups to prevent diesel generators from still being frequently used? Resilience needs to be built into the grid architecture to address times of power outages. **Response**: Minigrids are generally characterized by a very high availability. A recent report by the Africa Minigrid Developers Association (Benchmarking Africa?s Minigrids) shows that uptime of all monitored minigrids is 99% on average, which is significantly higher than all national interconnected grids. When power outages occur in minigrids, it is rarely due to inverter failure, but rather because the system shuts down due to overload or low battery state-of-charge (if there is no diesel generator), or because the diesel generator fails. Recent evidence is revealing that diesel generators are now more prone to failure than the renewable energy components. To prevent power outages, a minigrid should be sufficiently dimensioned. This can lead to larger amounts of excess energy being available at non-peak times, which cannot normally be used and reduce the overall system efficiency. Currently, new approaches are being developed that take advantage of artificial intelligence to manage loads, based on machine learning and stochastic optimization. Examples include intelligent control of diesel generators to minimize fuel consumption, demand side management to precisely control deferrable loads (e.g., water pumps) that can consume excess energy. All this leads to minimizing outages and the need to use diesel generators. (See Activities 2.2.2 and 2.2.5) -	Djibouti CEO endorsement/ approval request document: - Part II. Djibouti national project document: - Section III.
11. Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning? **Comment**: Proponents have partnered with Rocky Mountain Institute which has a distinguished record of innovative approaches to energy policy and there are clear highlights of scaling out (even though they note this as scaling ?up?). There is a focus on finding innovative ways of cost reduction and also to consider financing linkages between minigrids to promote resilience following the Rockefeller Foundation?s Cross Boundary Energy Access (CBEA) investment. projects. **Response:** NA	

Comment & Response	Reference
12. Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers? **Comment**: Adequate presentation of stakeholders through the UNF Minigrid Partnership. However, diesel generation industry is quite widespread in Africa and how to ensure they don?t sabotage prevalence of project and have incentives for new livelihoods should be considered. **Response**: Experience shows that deep-rural villages are usually not a market for the diesel generator industry as such. In many villages, however, individual owners of diesel or petrol generators can be found selling electricity to the neighborhood(s). These business models no longer work when a minigrid supplies the village with electricity. However, there is a significant demand for skilled labor in the minigrid sector. The local diesel generator operators can become important here, as they have the technical know-how on the one hand and know the respective village very well on the other. These skills can be put to good use, for example, for the rapid establishment of PUE, or in the context of rural industrialization approaches (e.g., KMM). Where relevant, this risk and related mitigation actions have been added to the risks log and elaborated upon in the CEO Endorsement request/approval document (Part II section 5).	Djibouti CEO endorsement/ approval request document: - Part II. Djibouti national project document: - Section II. Development Challenge
13. Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences? **Comment**: Yes ? there is a fairly detailed section on gender aspects of this project. projects. **Response:** NA	
14. Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project?s control? **Comment**: Identified. Detailed climate risk assessment should be carried out. **Response:** A climate risk assessment has been performed and included in the table risks of the Djibouti CEO Endorsement Request	Djibouti national project document: - Annex 7
15. Are the project proponents tapping into relevant knowledge and learning generated by other projects, including GEF projects? **Comment**: Good coordination details provided based on historical relations as well. projects. **Response:** NA	
16. What overall approach will be taken, and what knowledge management indicators and metrics will be used? **Comment**: Identified and details adequately provided. projects. **Response:** NA	

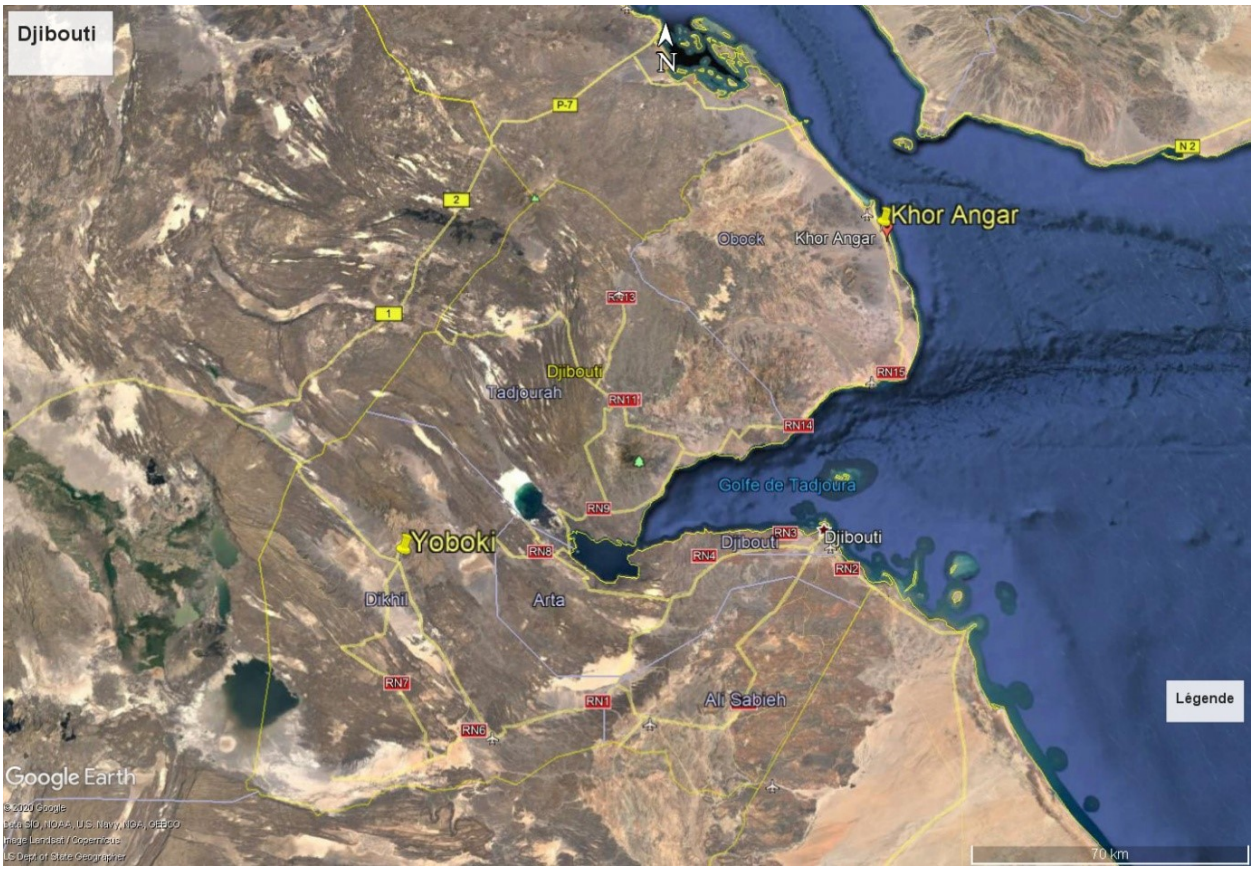
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	GETF/LDCF/SCCF Amount ($)		
	Budgeted Amount	Amount Spent To date	Amount Committed
Project Preparation Activities for PIMS 6327 Child Project under Africa Minigrids - Djibouti	125,000	57,146	67,854
Total	**125,000**	**57,146**	**67,854**

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

The locations proposed for the AMP pilot projects during PPG development are: Yoboki in Dikhil Prefecture, and Khor-Angar in Obock Prefecture.



ANNEX E: Project Budget Table

Please attach a project budget table.

Appendix A: Indicative Project Budget Template

Expenditure Categor	Detailed Description	Component (USDeq.)	Total (USDeq.)	Responsible Entity

y		***Component 1***	***Component 2***	***Component 3***	***Component 4***	***Sub-Total***	***M&E***	***PMC***		(Executing Entity receiving funds from the GEF Agency)[1]

Material & Goods	Investment budget for the purchase of system components, i.e. goods and material, for the pilot project(s). This tentatively includes: (a) Two solar PV-batteries mini-grid pilot projects installed and commissioned in Yoboki and Khor Agar (USD 825,656), (b) Ice Production Facility is established and connected to the mini-grid pilot in Khor Agar (USD 314,000), and (c) Stand-alone solar PV lighting poles are installed in Yoboki and Khor Agar (USD 125,656). The Procurement Plan will be developed during Year 1 of implementation when further studies are conducted and the exact location and systems? capacity are identified.	-	1,265,321	-	-	**1,265,321**	-	-	**1,265,321**	MUET

International Consultants	The budget for international consultants includes working with experts with experience in mini-grid policy and regulations, organizational development and institutional capacity building, mini-grid education and vocational training, technical standards and quality control, mini-grid design, productive use, tendering and commercialization, financial market analysis and financing mechanism development, investor relations and capacity building. The M&E budget includes hiring International M&E Consultants to conduct the MTR and TE missions.	186,400	100,000	110,000	-	**396,400**	100,000	-	**496,400**	MUET

Local Consultants	The budget for local consultants includes working with specialists to provide support to the team of international consultants and contractors on performing their duties and contextualizing the work and findings to the baseline and needs of the mini-grid sector in Djibouti. Their specialties will mirror those of the international consultants. The M&E budget includes hiring a SES and Gender Officer to conduct quarterly visits and reporting throughout the 4 years project duration, as well as the fees for hiring Local M&E Consultants to support the MTR and TE missions.	123,000	60,000	60,000	-	**243,000**	36,800	-	**279,800**	MUET

Contractual Services ? Individual	Fees for contracting national and international consultants to conduct the initial full quantitative national DREI analysis under Component 1, develop the Procurement Plan for the project under Component 2, and support the design and implementation of effective KM, M&E and QA systems and procedures, including national digital convening platform for key stakeholders, under Component 4. The PMC budget includes hiring full time local staff for the Project Manager	50,000	67,000	-	20,000	**137,000**	-	51,448.74	**188,448.74**	MUET

Contractual Services ? Company	Fees under Component 1 is to support the project team with conducting market research and associating studies. Fees under Component 2 is for hiring the contractor to undertake the site work required to install and commission the pilot projects, in accordance with the Procurement Plan to be developed during Year 1 of project implementation. Contract under Component 3 is to perform market analysis to identify and promote financial schemes and incentives. Fees under Component 4 is for hiring a local firm for data collection and development of communications content (including photos and/or video footage) for the preparation of an	160,000	120,000	96,000	10,000	**386,000**	16,200	-	**402,200**	MUET

Trainings, Workshops, Meetings	Expenditures for organizing consultation meetings, stakeholders? engagement conferences, capacity building workshops and round table discussions, to support project implementation and sustainability.	100,000	50,000	60,000	29,243	**239,243**	-	-	**239,243**	MUET

Travel	Budget for travel expenses for missions conducted by international consultants contracted to perform activities under Components 1, 2, 3 and 4. Under Component 1, the budget includes USD 7,500 for DREI-related missions. Under Component 4, the budget for travel also includes USD 10,000 allocated for project participation in the CoP meetings to be organized by the AMP Regional Project.	45,336	19,893	19,899	20,000	**105,128**	-	-	**105,128**	MUET
Services to Projects (Direct Project Cost)	Fees for UNDP to provide country support services	-	-	-	-	-	-	90,631.26	**90,631.26**	MUET
IT Equipment	Software, computers, and IT tools for the project team.	-	-	-	-	-	-	4,175	**4,175**	MUET
Grand Total		**664,736**	**1,682,214**	**345,899**	**79,243**	**2,772,092**	**153,000**	**146,255**	**3,071,347**	

[1] In exceptional cases where GEF Agency receives funds for execution, Terms of Reference for specific activities are reviewed by GEF Secretariat

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).